

FIG. 1A

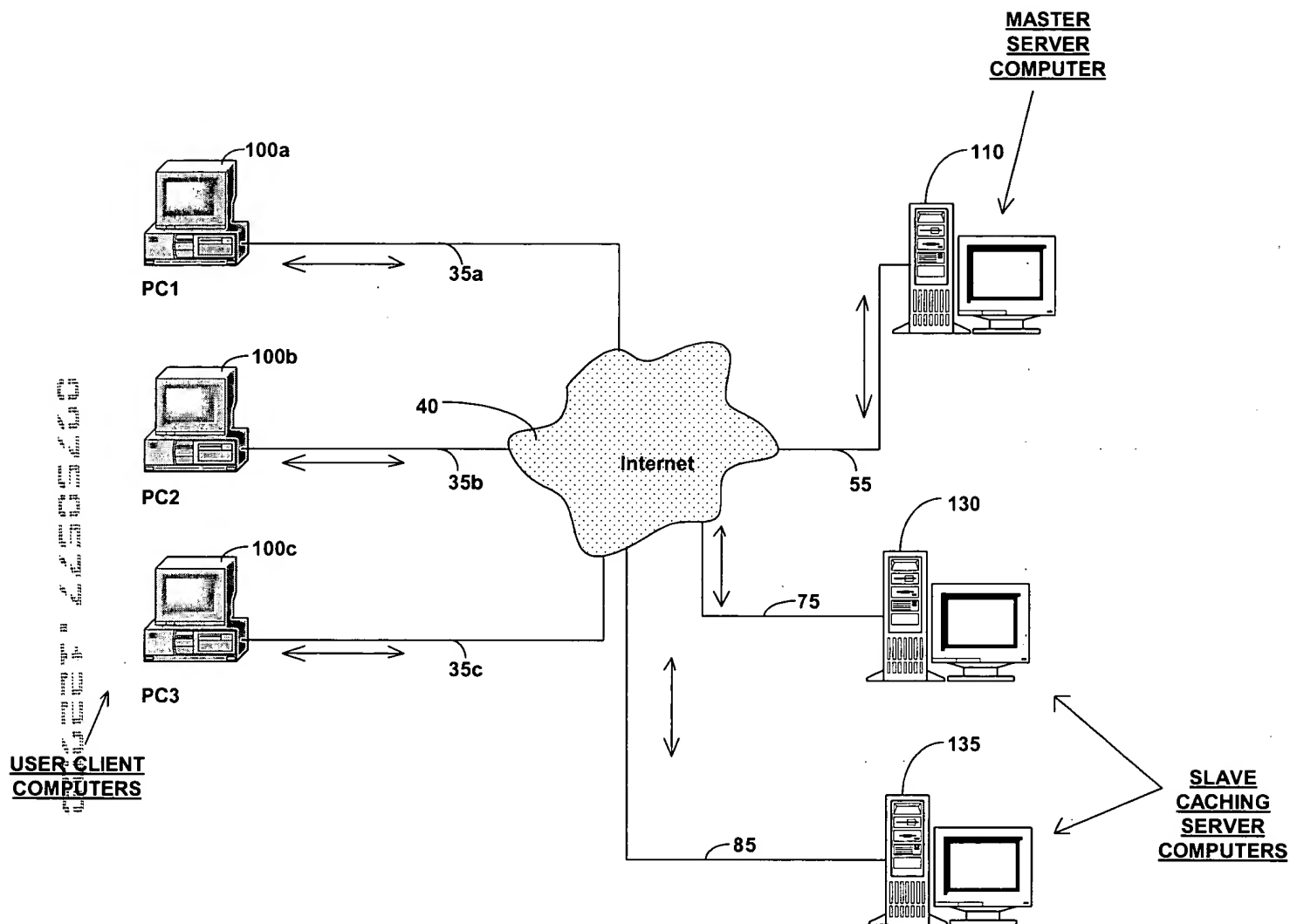


FIG. 1B

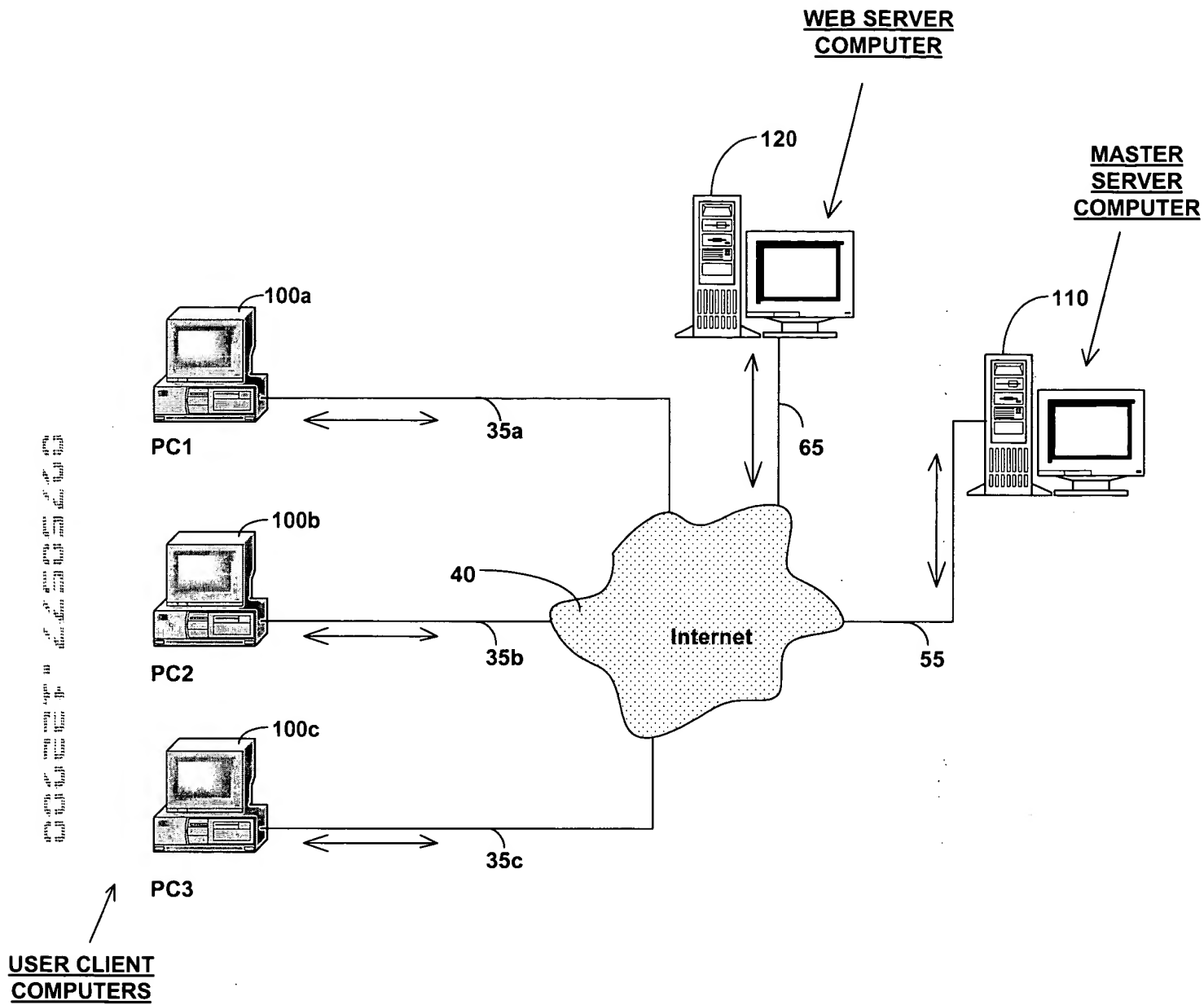


FIG. 1C

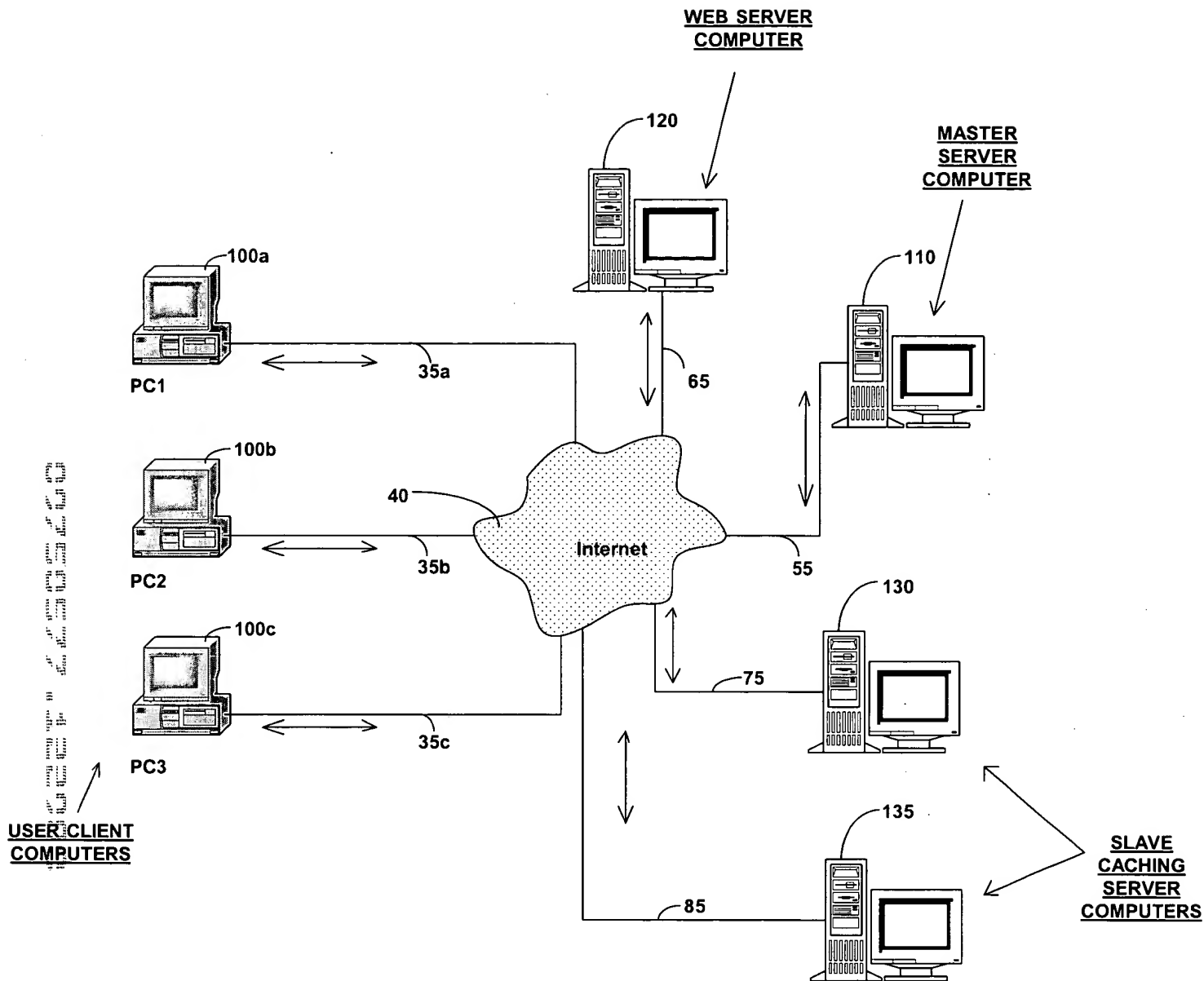


FIG. 1D

FIG. 2A(1)

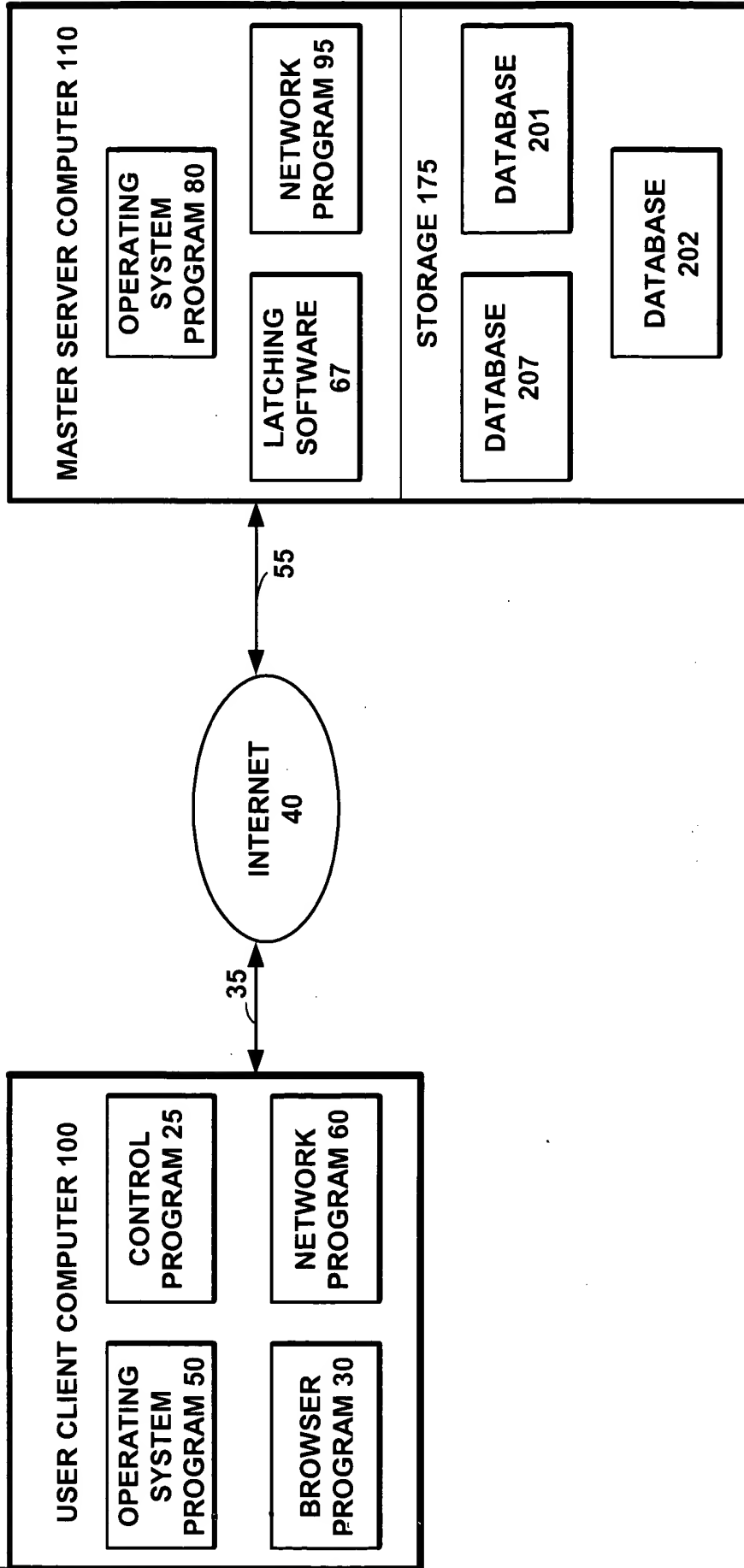


FIG. 2A(2)

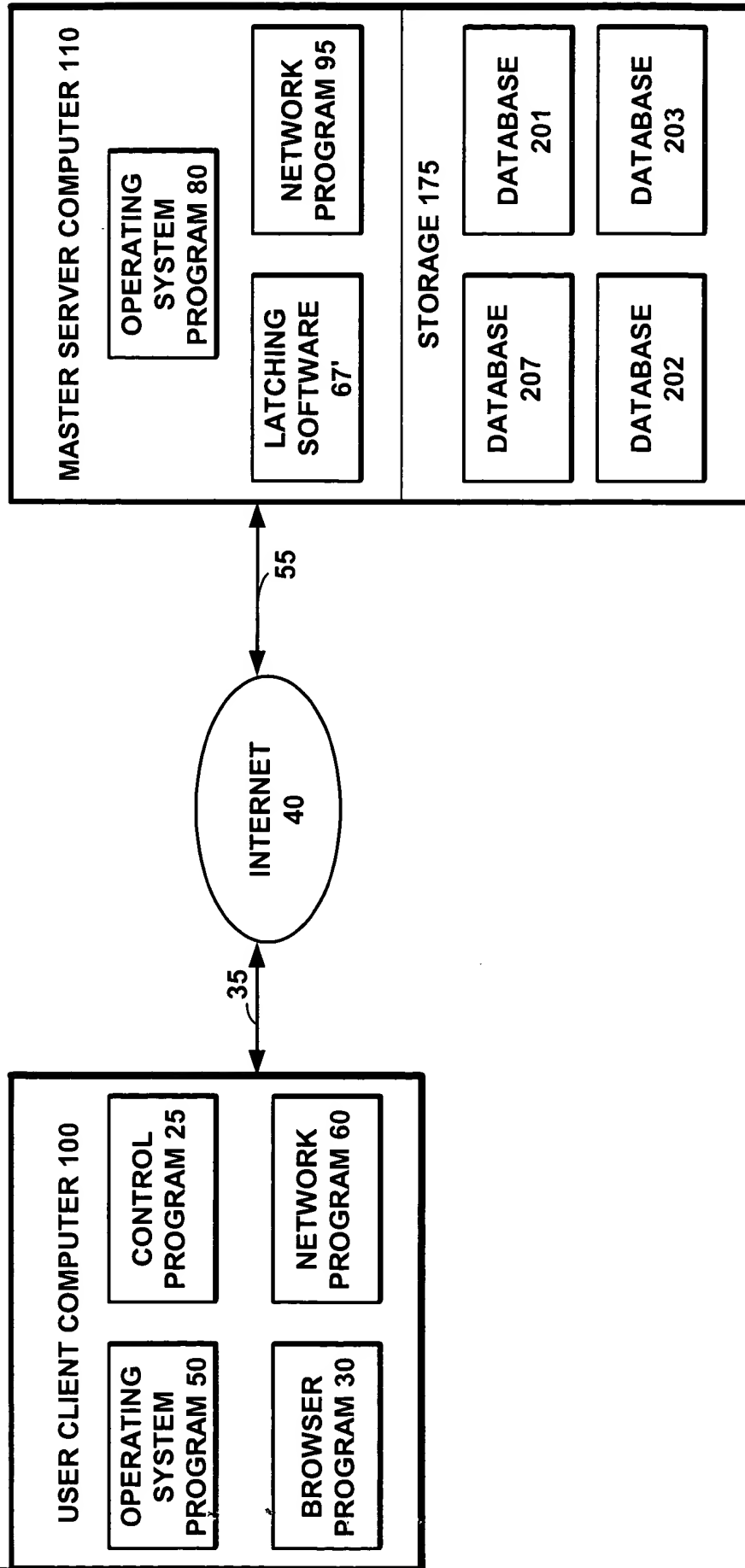
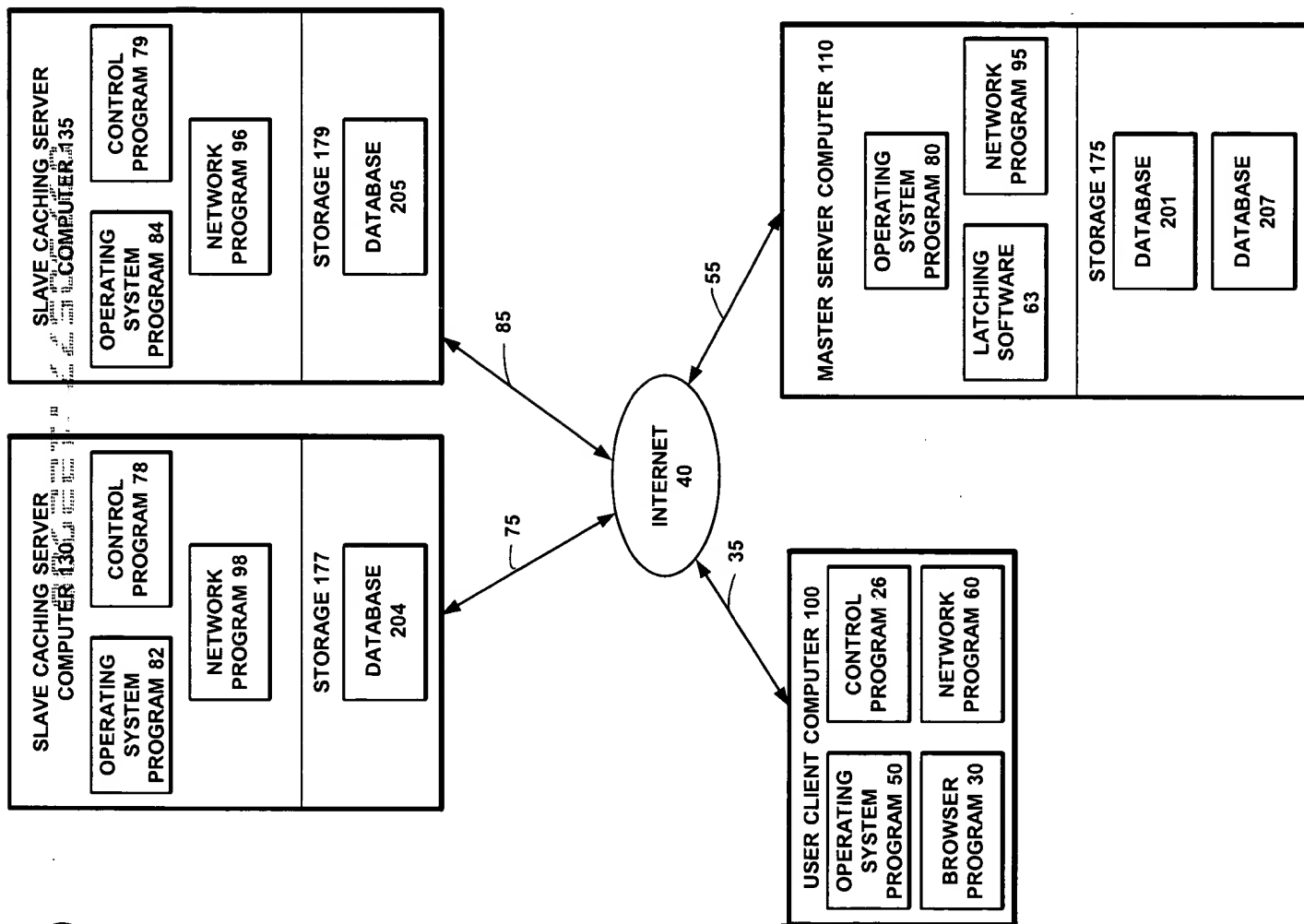


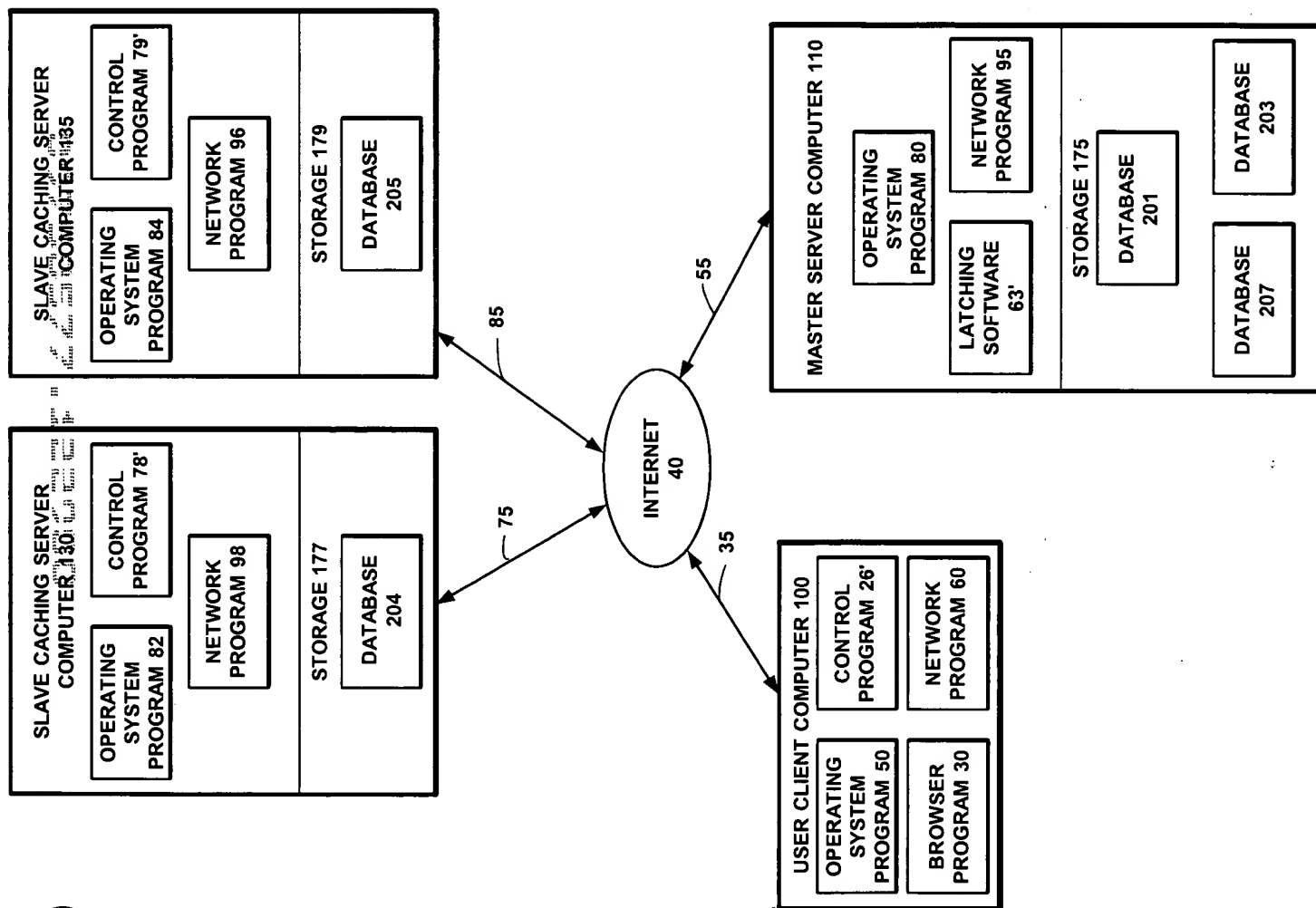
FIG. 2B(1)



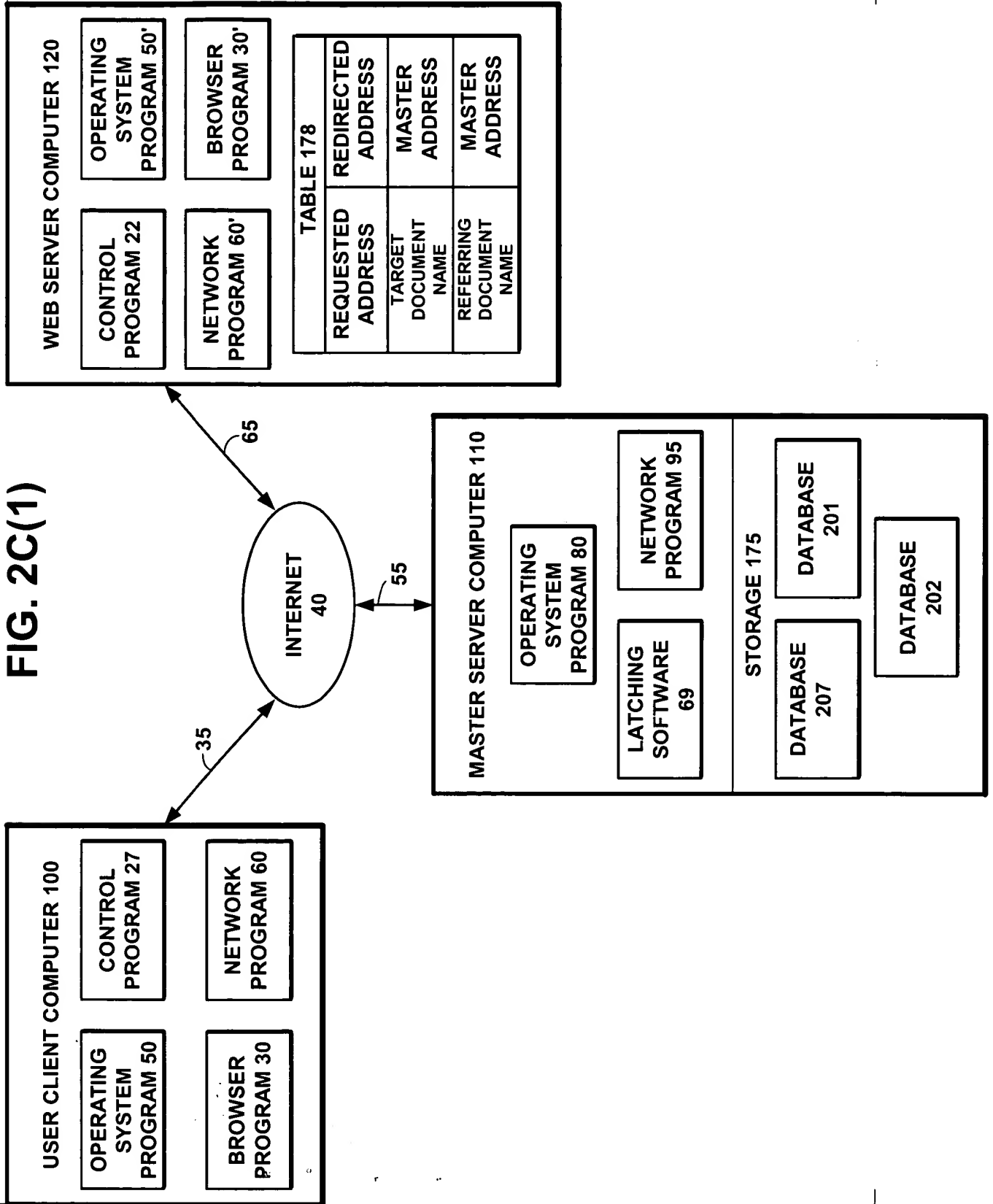
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FIG. 2B(2)

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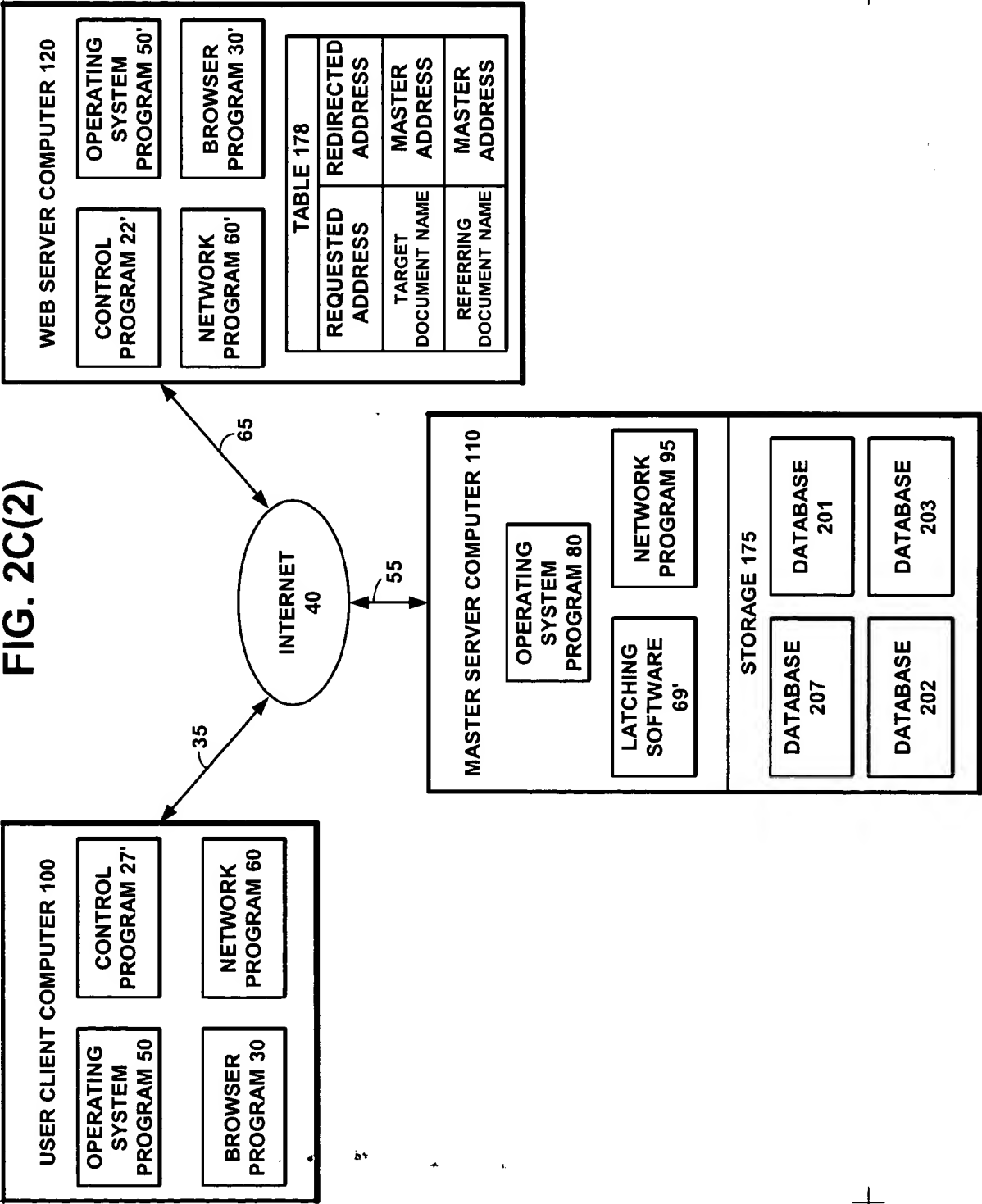


FIG. 2D(1)

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ATTACHMENTS IN DOCUMENTS

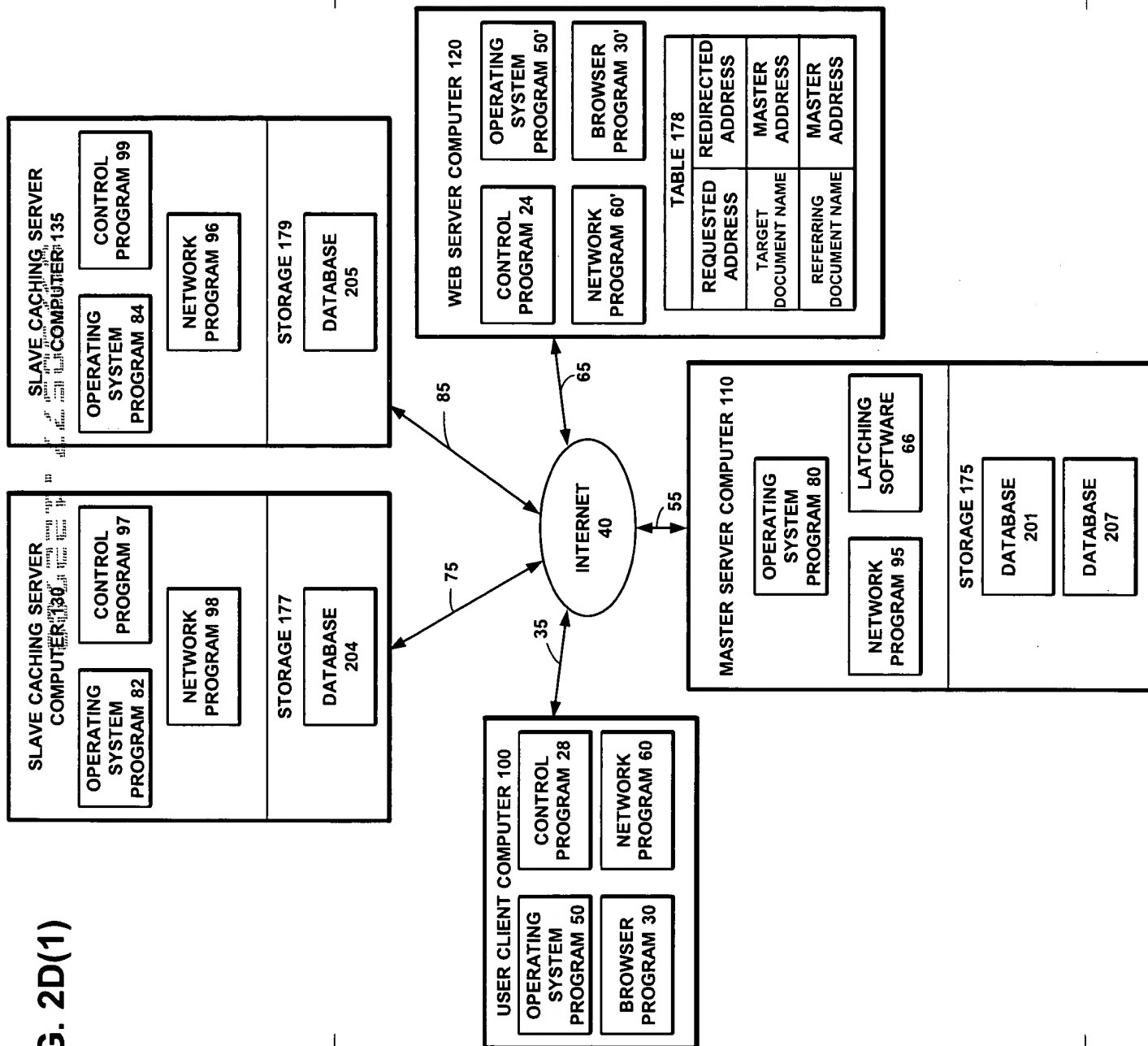


FIG. 2D(2)

EPHRAIM FEIG
A SYSTEM AND METHOD FOR USING LINKS AS VIRTUAL
ATTACHMENTS IN DOCUMENTS

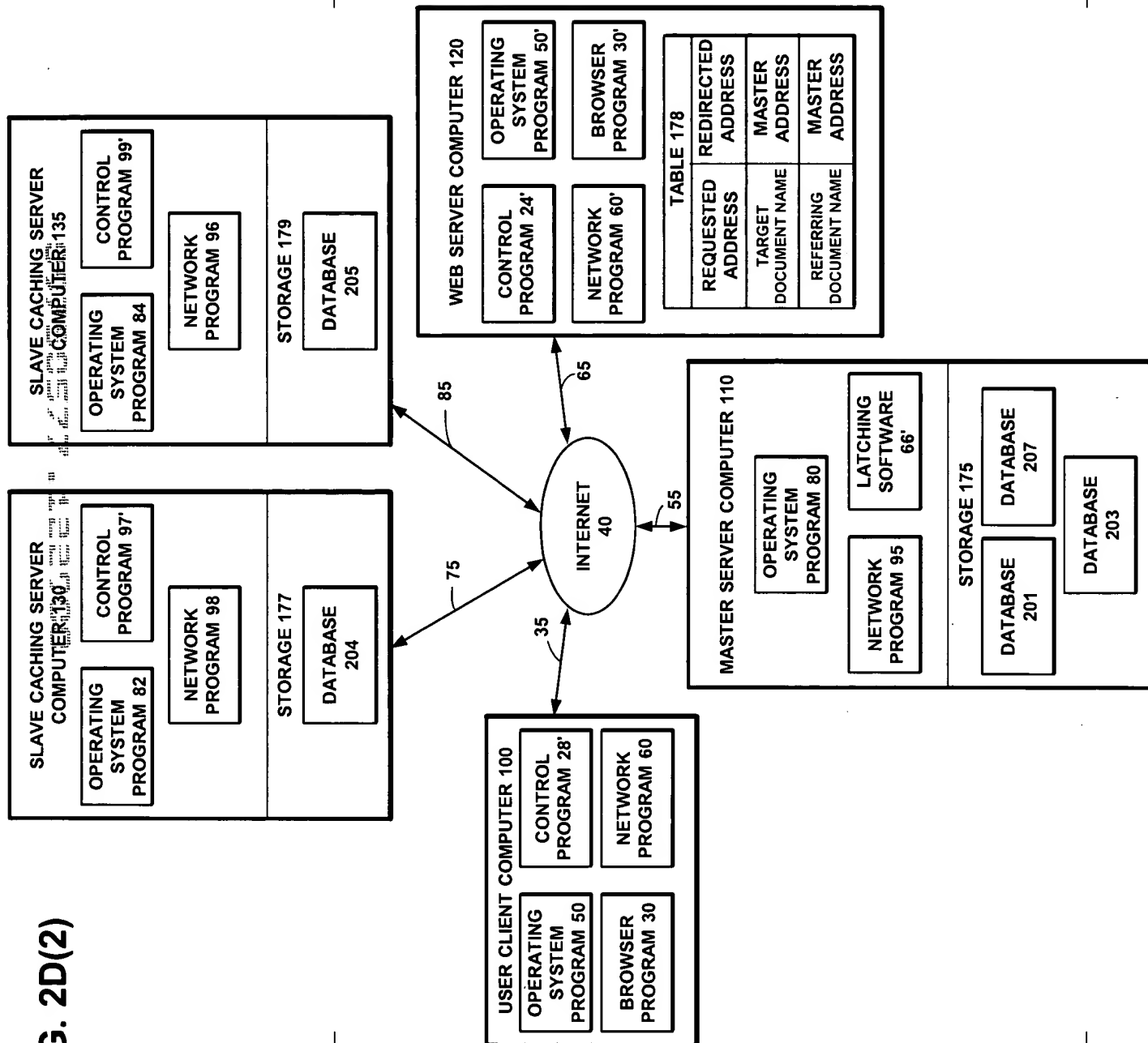


FIG. 3A(1)

STORAGE 175

MASTER 101

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DB307/1

OWNERS DATA BASE 201

URL OF TARGET DOCUMENT IN MASTER SERVER COMPUTER (110) (ID OF TARGET DOCUMENT)	REFERRING DOCUMENTS STORED ON MASTER SERVER COMPUTER (110) (ID OF TARGET DOCUMENT)
www.cnn.com/master/100/pcu/LISA.jpg	www.cnn.com/master/100/DB307/master_letter.doc www.cnn.com/master/100/DB307/master_report.doc www.cnn.com/master/100/DB307/master_business_promo.doc
www.cnn.com/master/100/pictures/WASH.jpg	www.cnn.com/master/100/DB307/master_letter.doc www.cnn.com/master/100/DB307/master_report.doc www.cnn.com/master/100/DB307/master_business_promo.doc

TARGET DOCUMENT DATA BASE 202

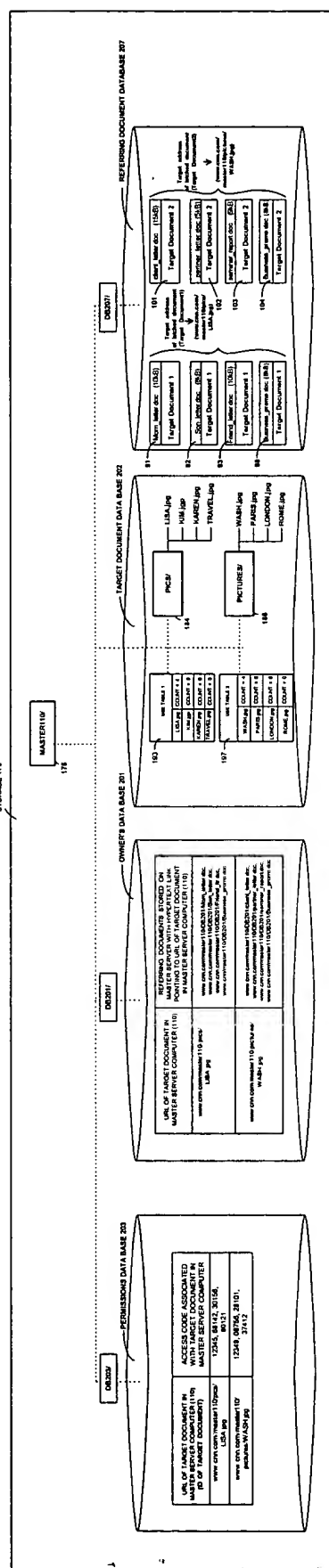
UNIT TABLE 1	UNIT TABLE 2
LISA.jpg COUNT = 4	WASH.jpg COUNT = 4
KIM.jpg COUNT = 0	PARIS.jpg COUNT = 0
KAREN.jpg COUNT = 0	LONDON.jpg COUNT = 0
TRAVEL.jpg COUNT = 0	ROME.jpg COUNT = 0

DB307/2

REFERRING DOCUMENT DATABASE 207

Target address of linked document (Target Document1)	Target address of linked document (Target Document2)
191 Main_letter.doc (100B) Target Document 1	191 den_letter.doc (100B) Target Document 2
192 Son_letter.doc (80B) Target Document 1	192 letter_letter.doc (80B) Target Document 2
193 Friend_letter.doc (100B) Target Document 1	193 letter_report.doc (90B) Target Document 2
194 Business_promo.doc (80B) Target Document 1	194 Business_promo.doc (80B) Target Document 2

FIG. 3A(1)



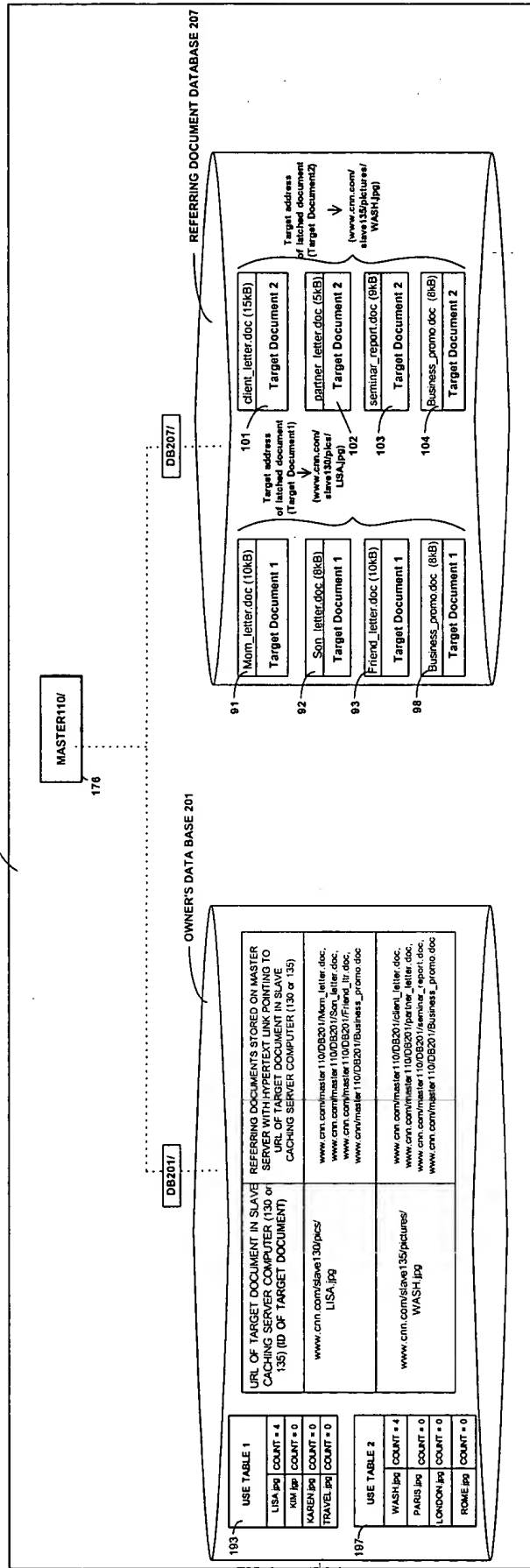


FIG. 3B(1)

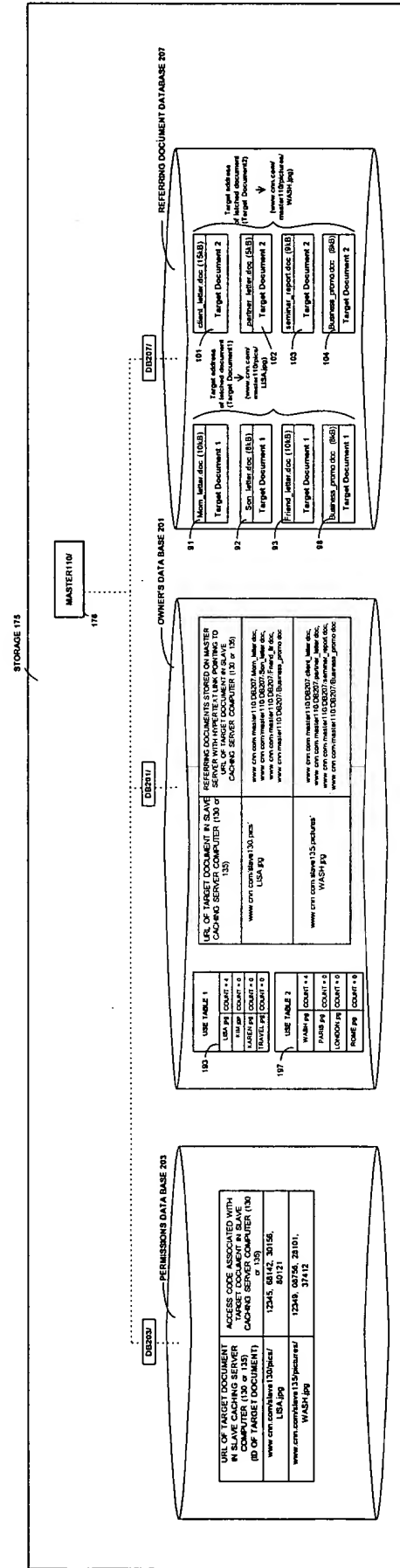


FIG. 3C(1)

STORAGE 175

MASTER110/ 176

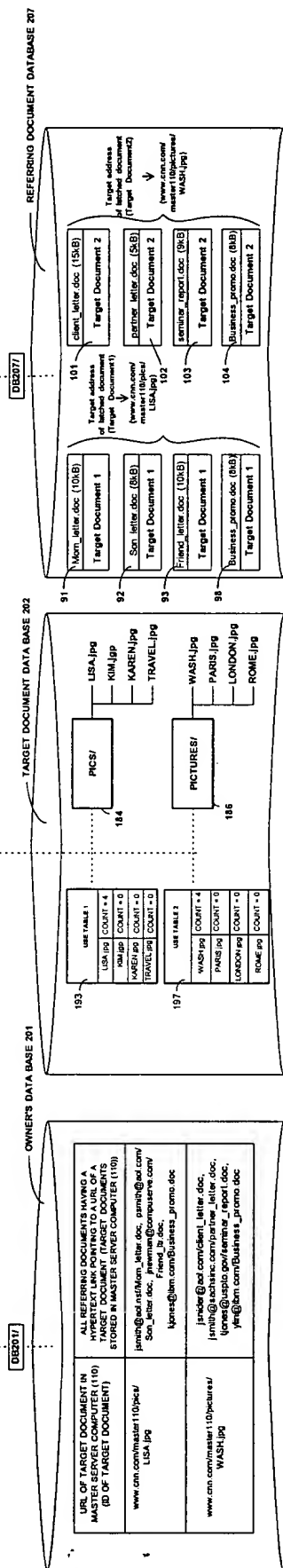
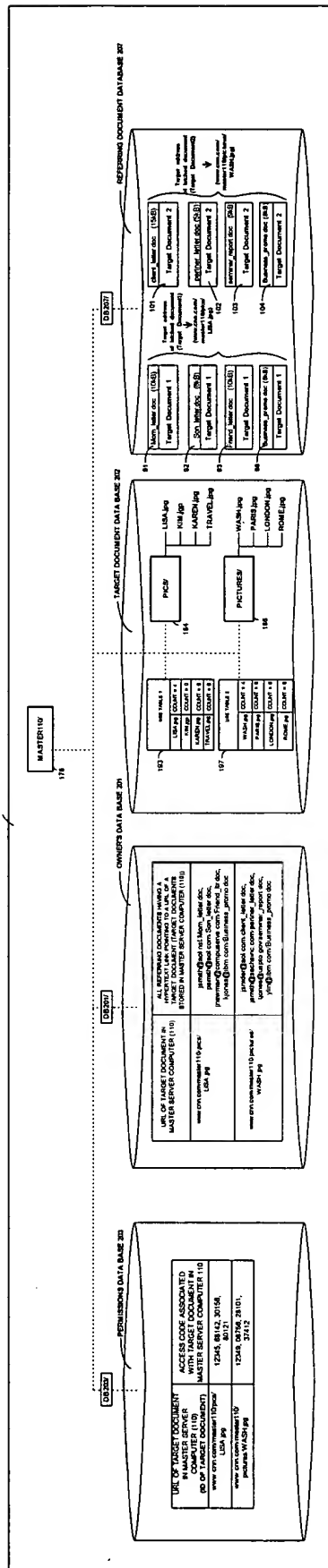


FIG. 3C(1)

FIG. 3C(2)



MASTER110/

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OWNER'S DATA BASE 201

USE TABLE 1		
LISA.jpg	COUNT = 4	
KIM.jpg	COUNT = 0	
KAREN.jpg	COUNT = 0	
TRAVEL.jpg	COUNT = 0	

USE TABLE 2		
WASH.jpg	COUNT = 4	
PARIS.jpg	COUNT = 0	
LONDON.jpg	COUNT = 0	
ROME.jpg	COUNT = 0	

URL OF TARGET DOCUMENT IN SLAVE CACHING SERVER COMPUTER (130 or 135) (ID OF TARGET DOCUMENT)	ALL REFERRING DOCUMENTS HAVING A HYPertext LINK TO ONE OF A TARGET DOCUMENT / TARGET DOCUMENTS STORED IN SLAVE CACHING SERVER COMPUTER (130 or 135)
www.cnn.com/slave130/pics/LISA.jpg	jsmith@aol.com/Mom_letter.doc, permith@aol.com/Son_letter.doc, jnewman@compuserve.com/Friend_1tr.doc, jones@bmi.com/Business_promo.doc
www.cnn.com/slave135/pictures/WASH.jpg	jsnyder@aol.com/client_letter.doc, jones@sachsinc.com/partner_letter.doc, jones@uspto.gov/seminar_report.doc, ylin@bmi.com/Business_promo.doc

REFERRING DOCUMENT DATABASE 207

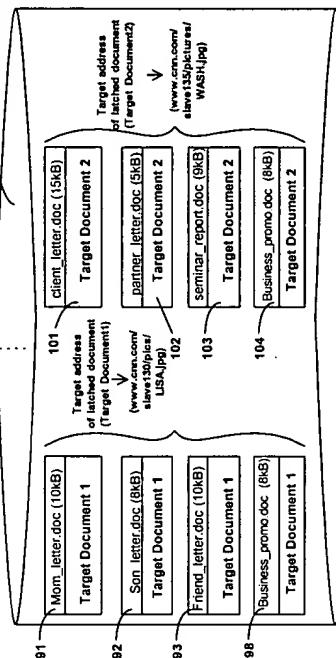


FIG. 3C(3)

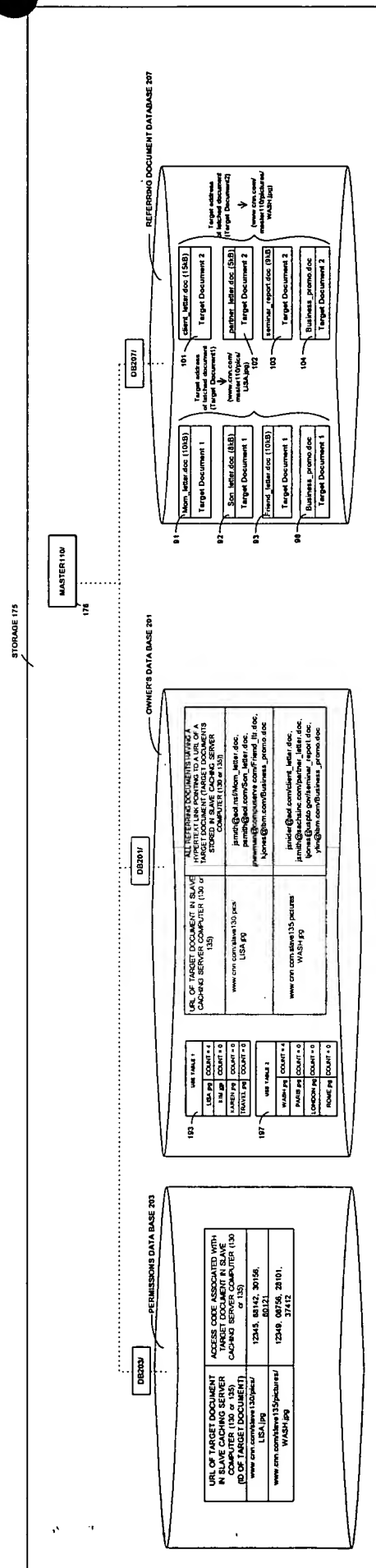


FIG. 3C(4)

FIG. 4

STORAGE 177

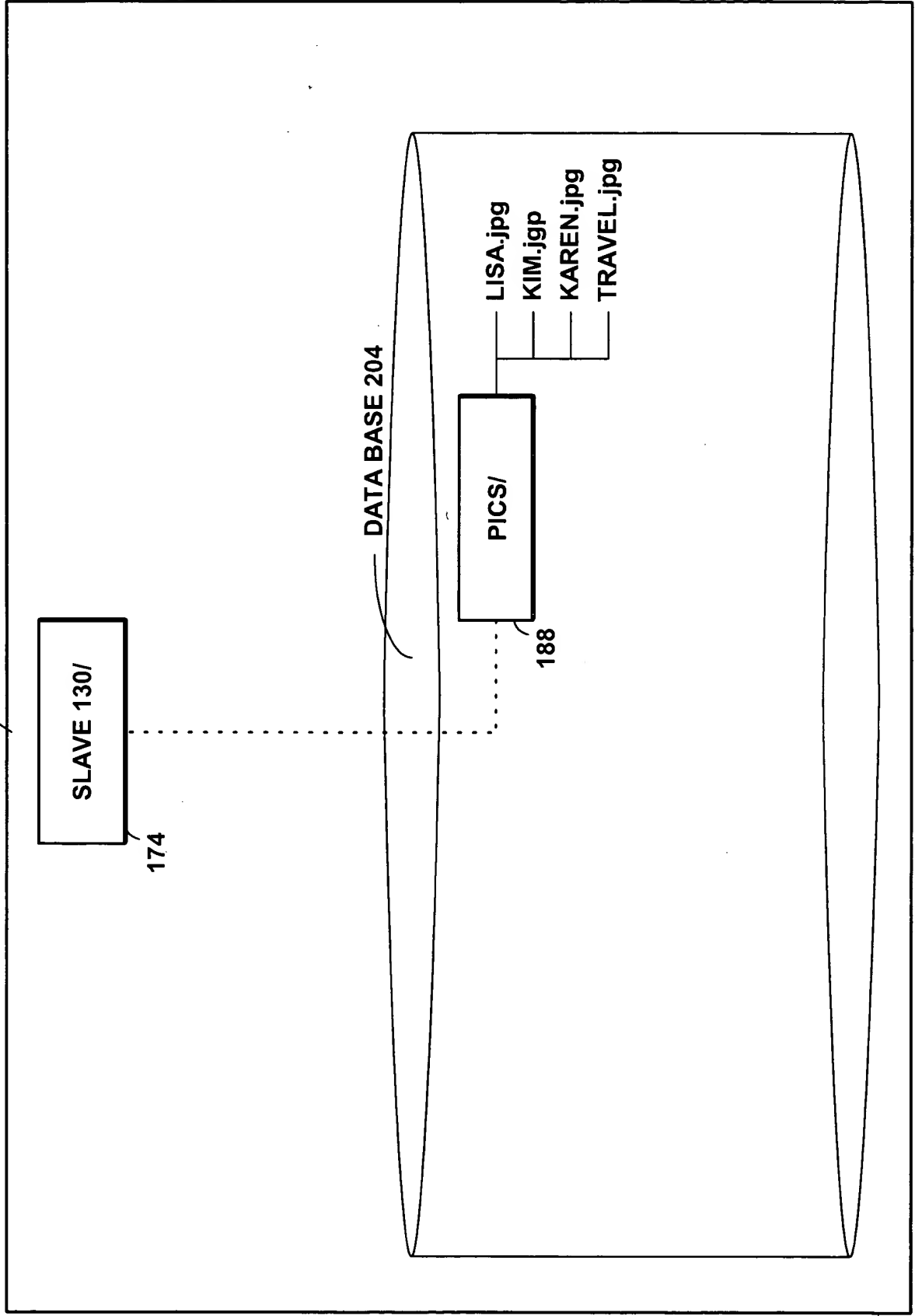


FIG. 5

STORAGE 179

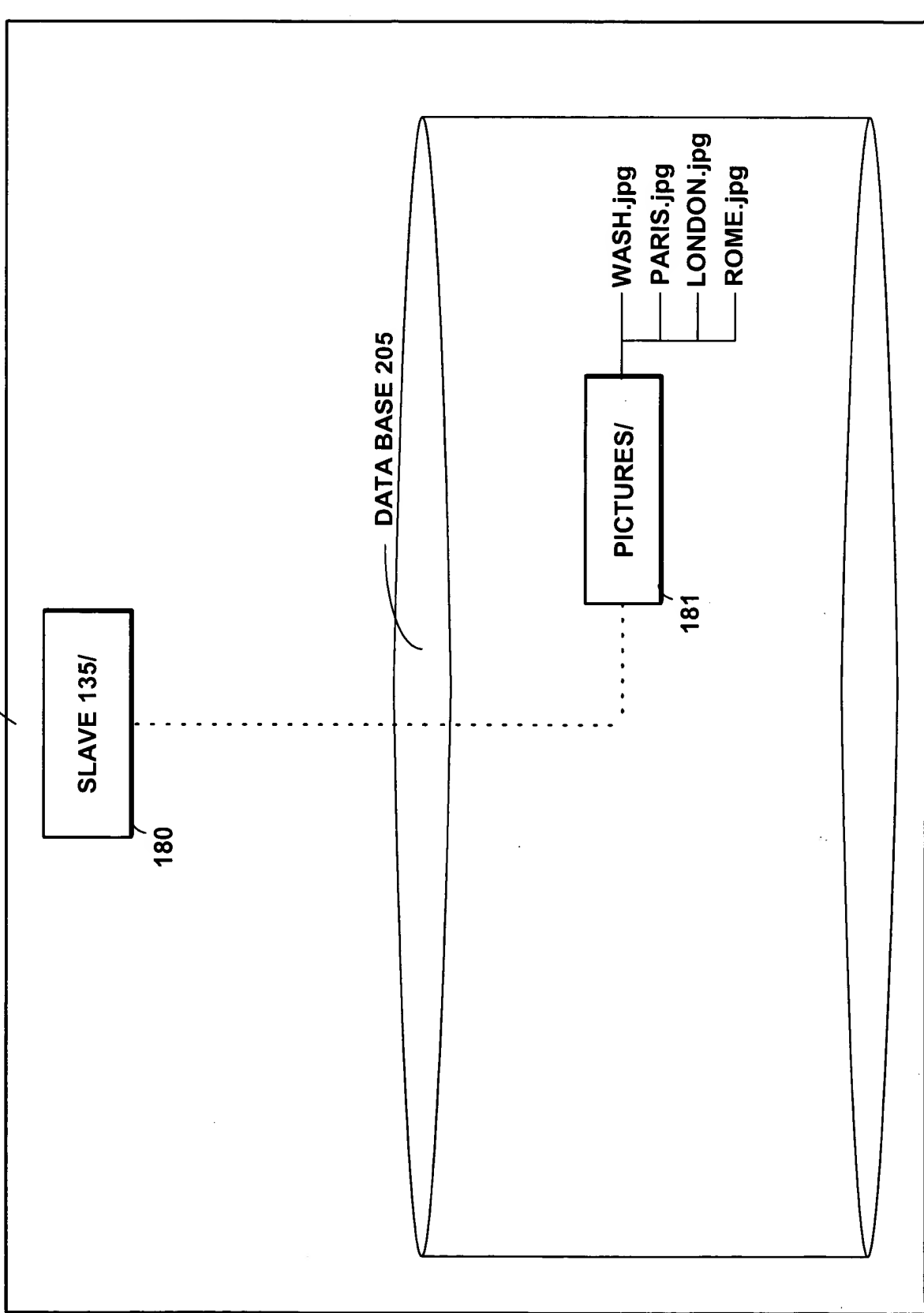


FIG. 6A(1)

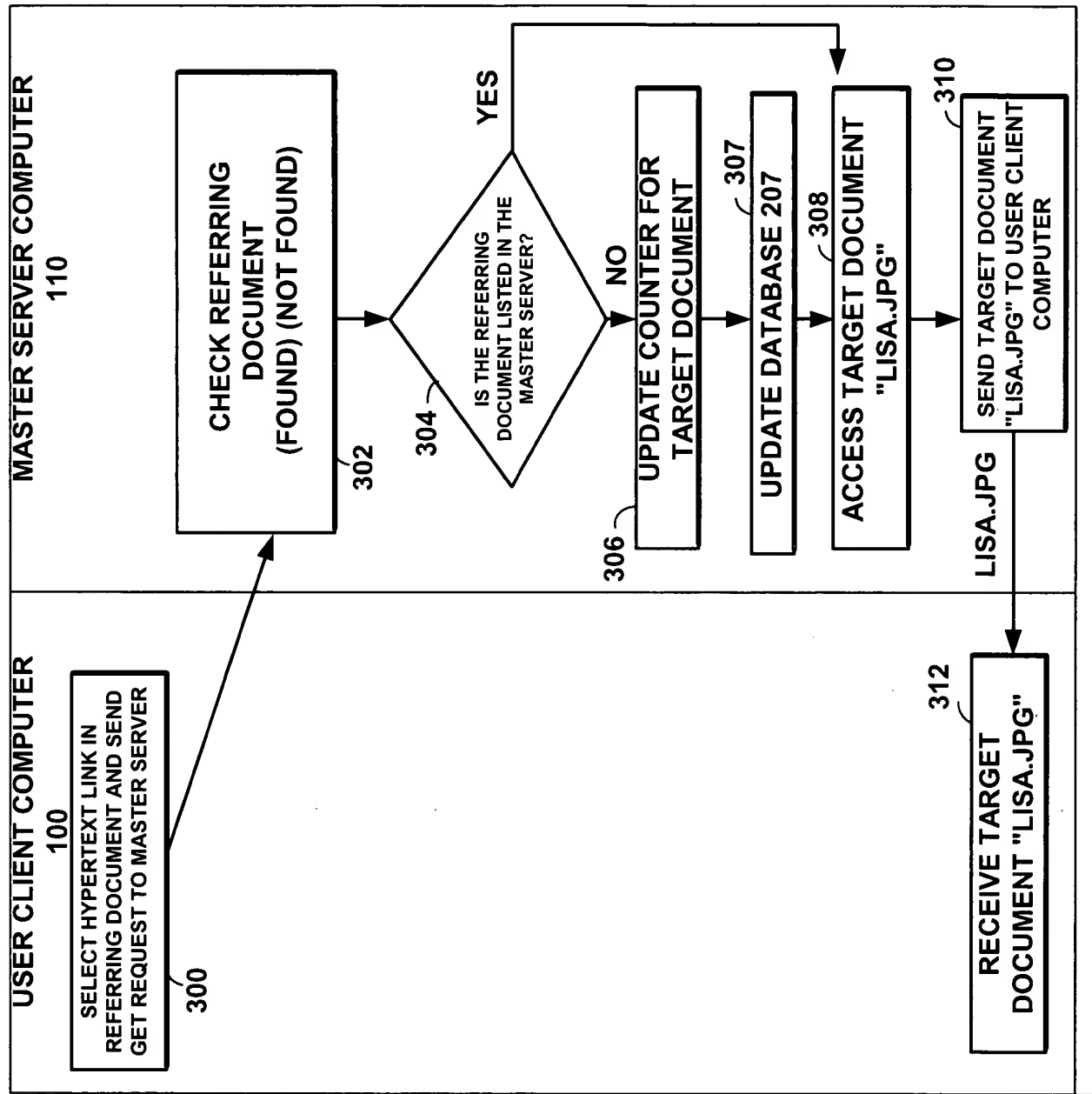


FIG. 6A(2)

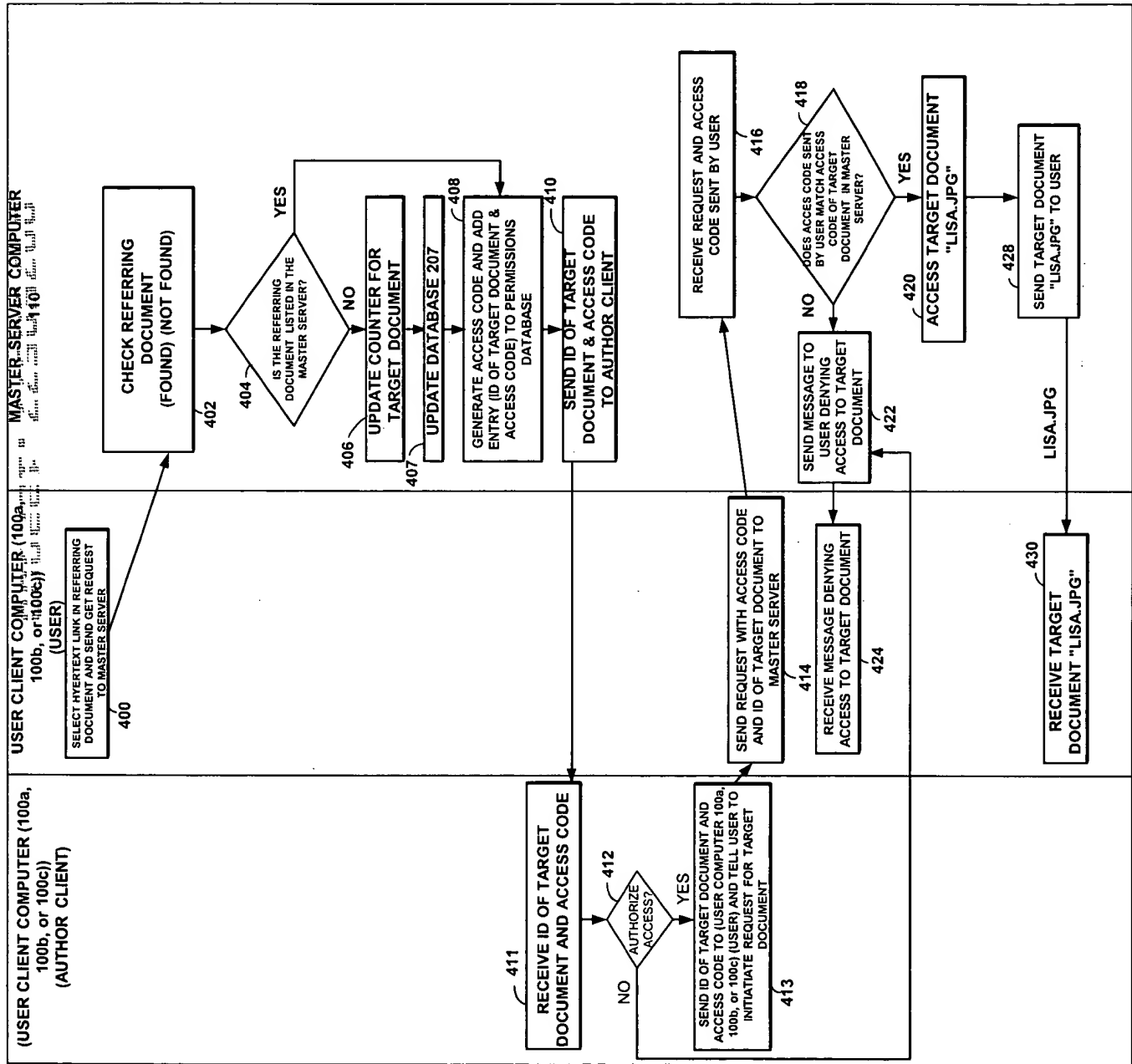


FIG. 6B(1)

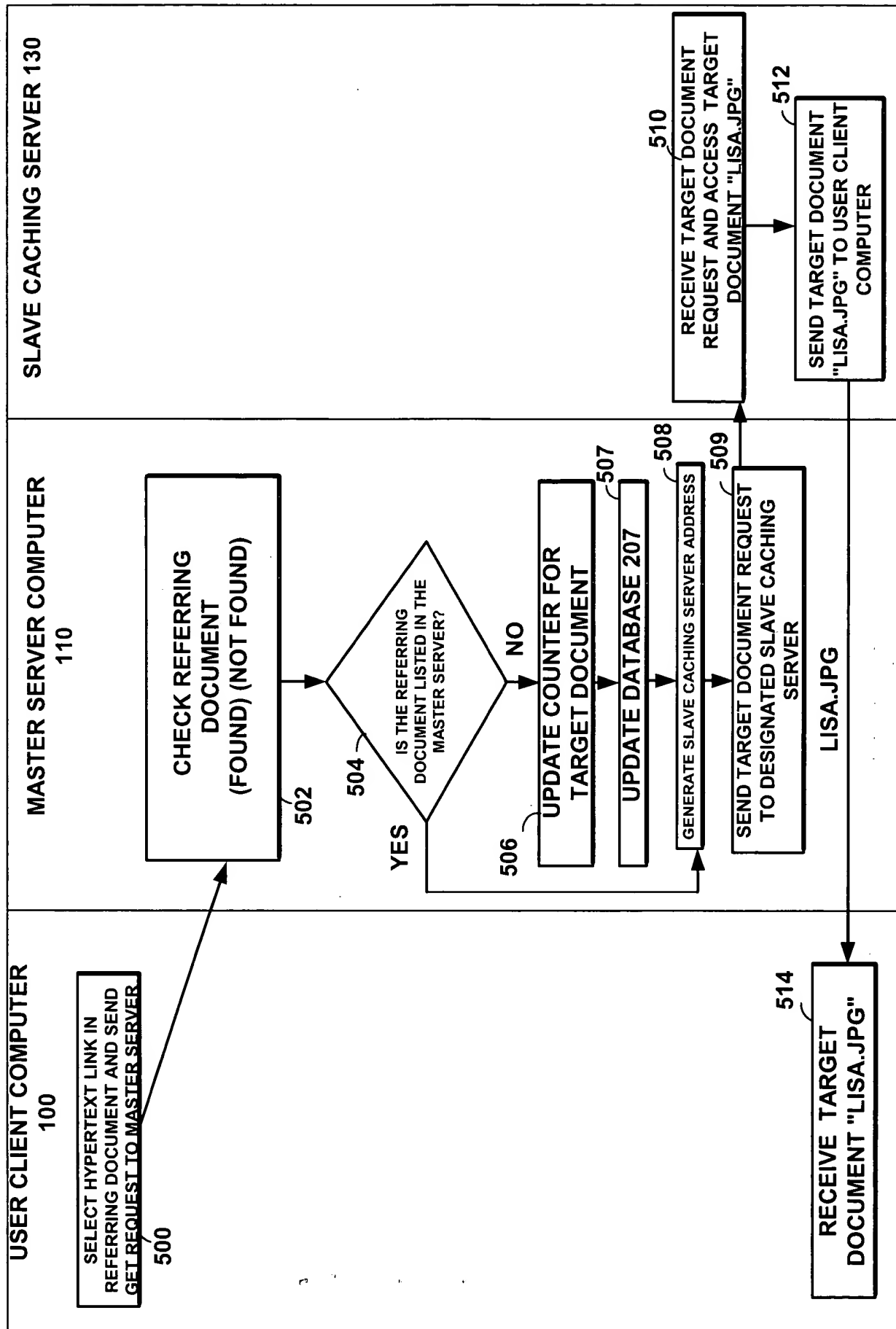


FIG. 6B(2)

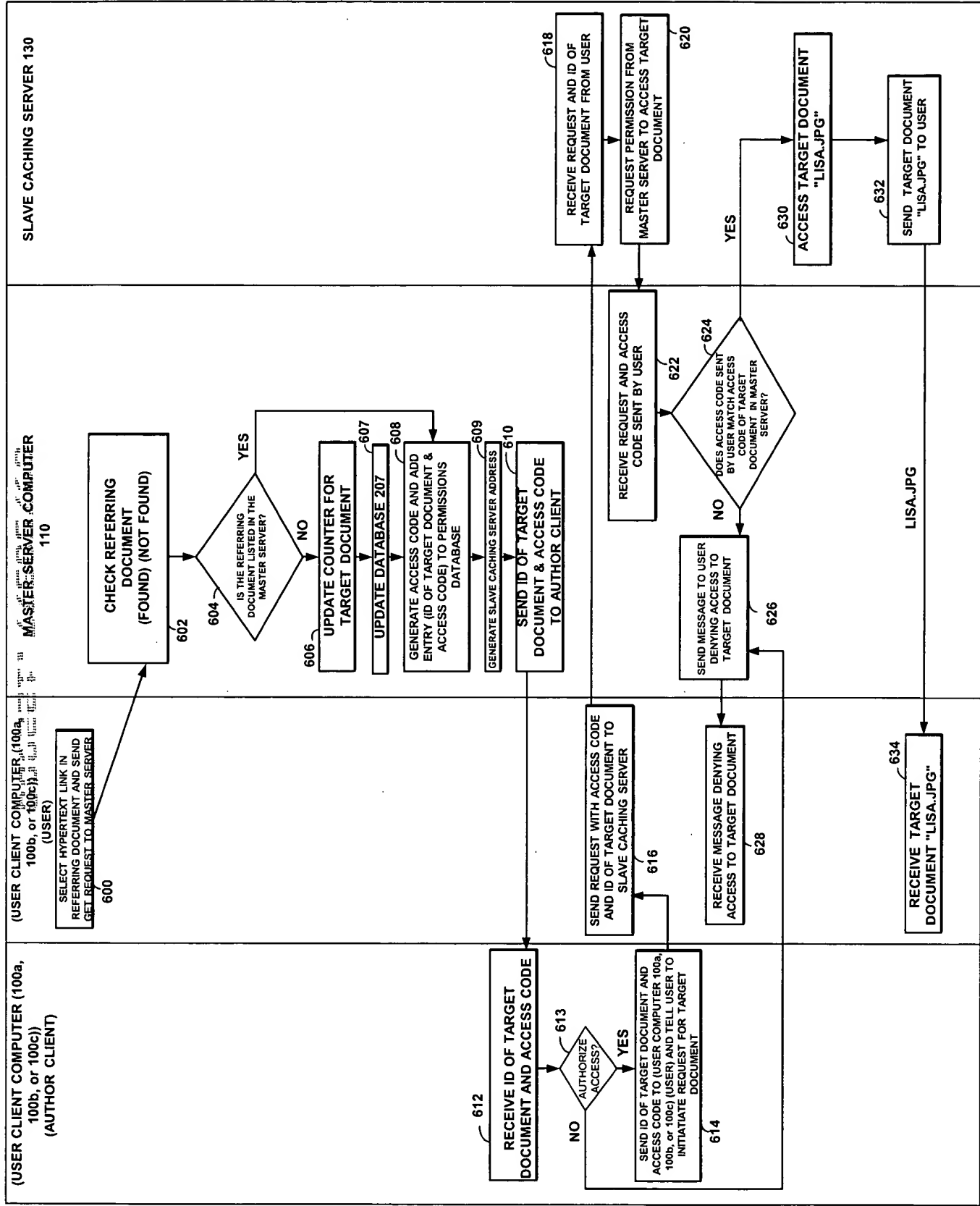


FIG. 6C(1)

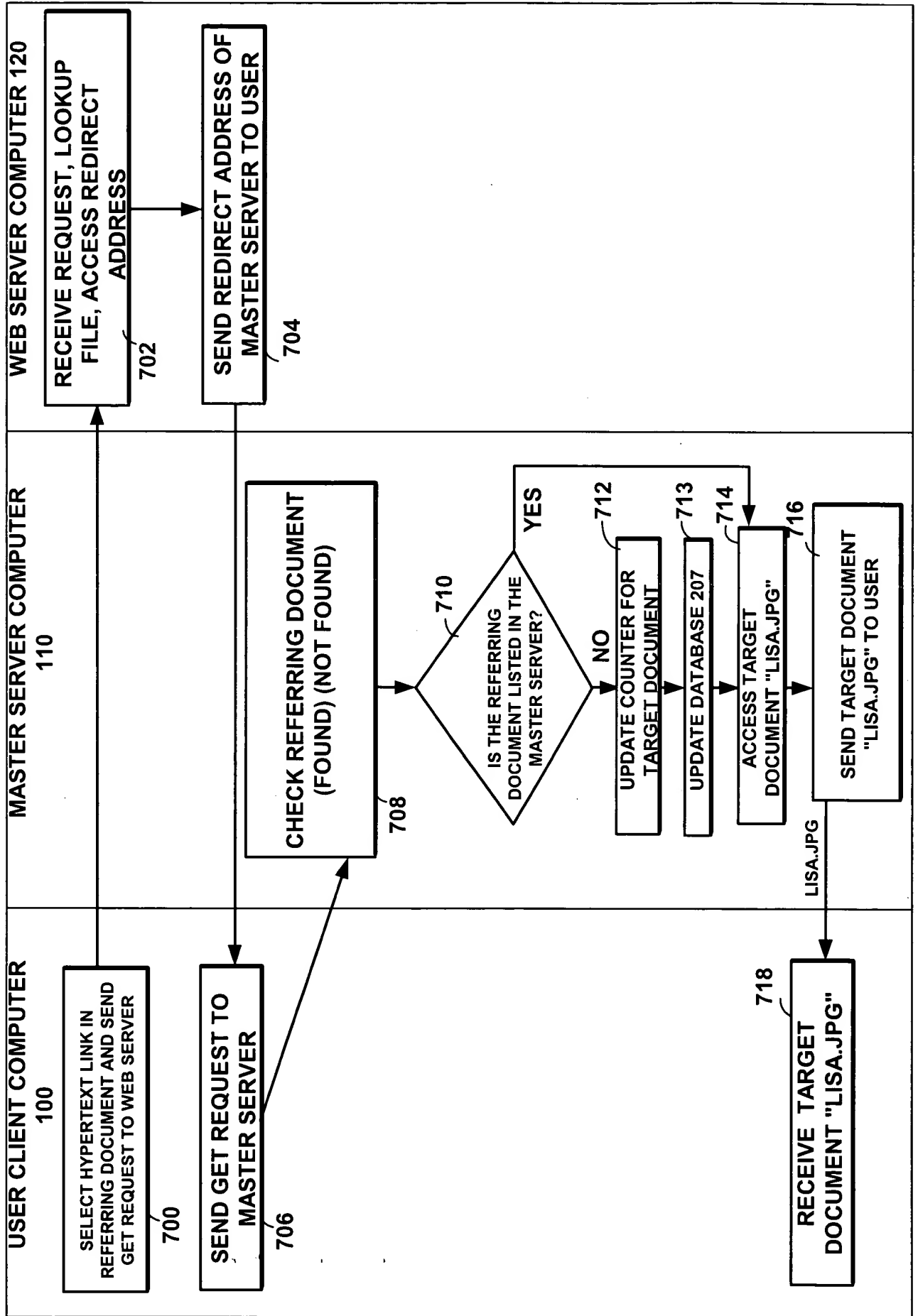
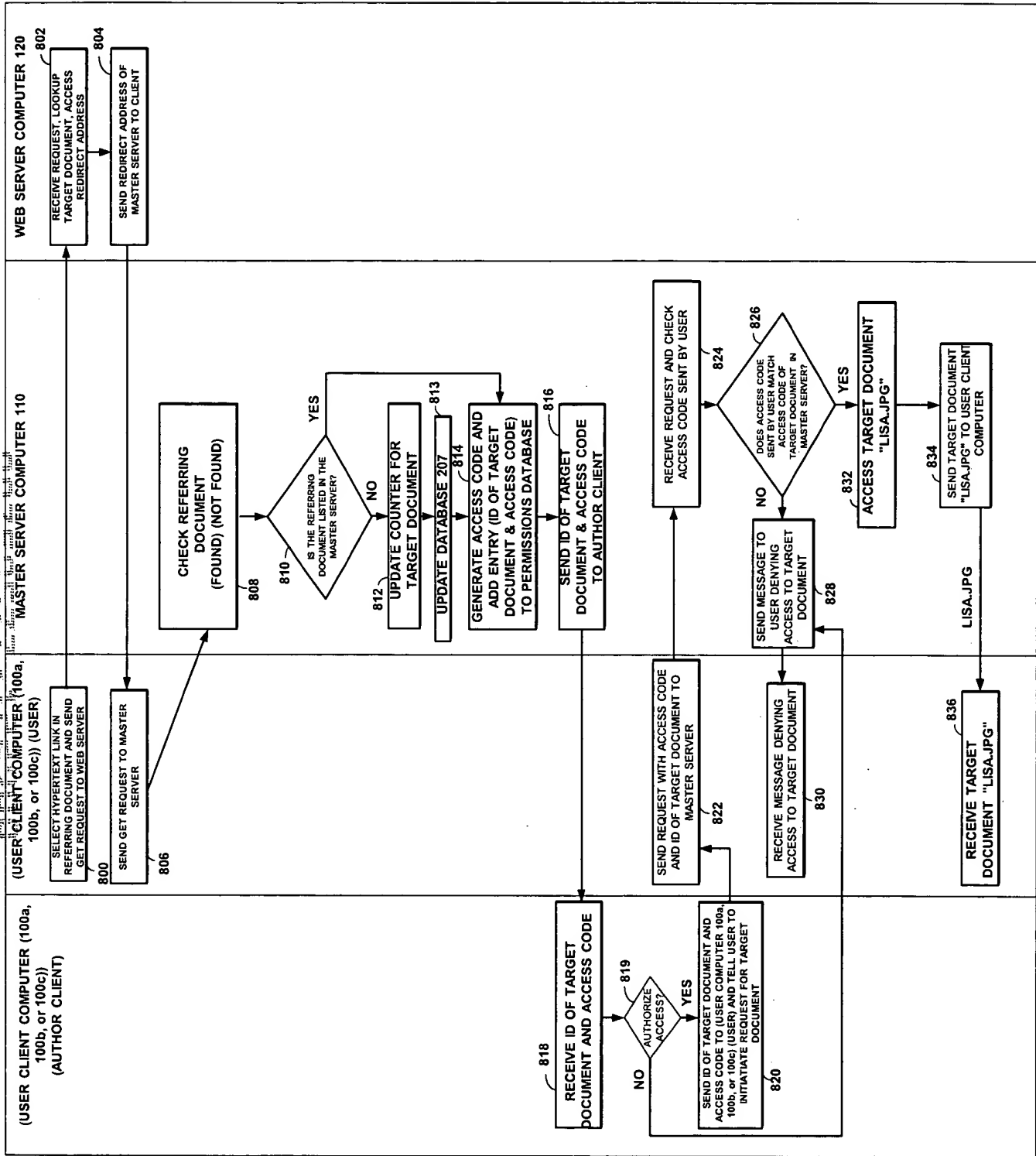


FIG. 6C(2)



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FIG. 6D(1)

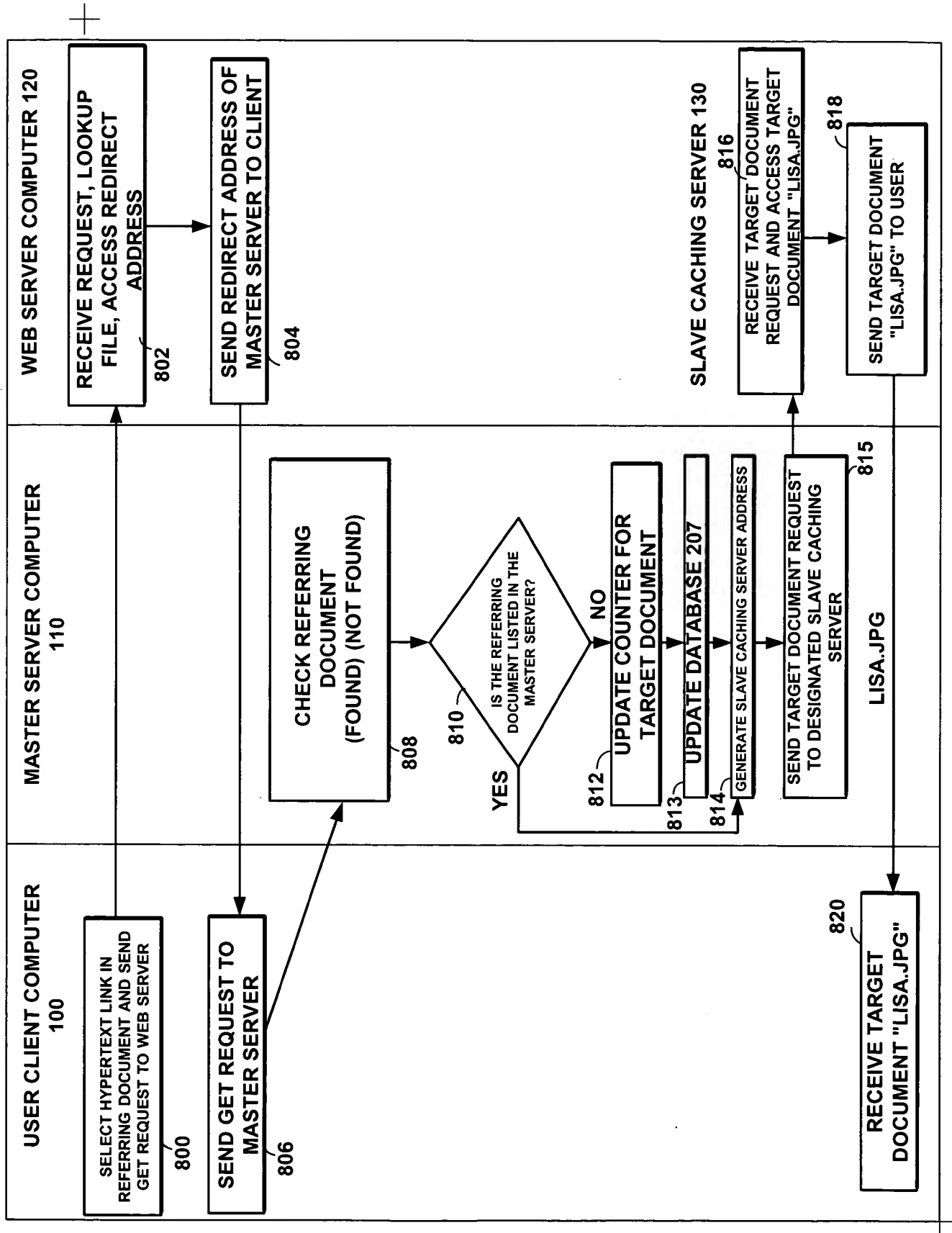
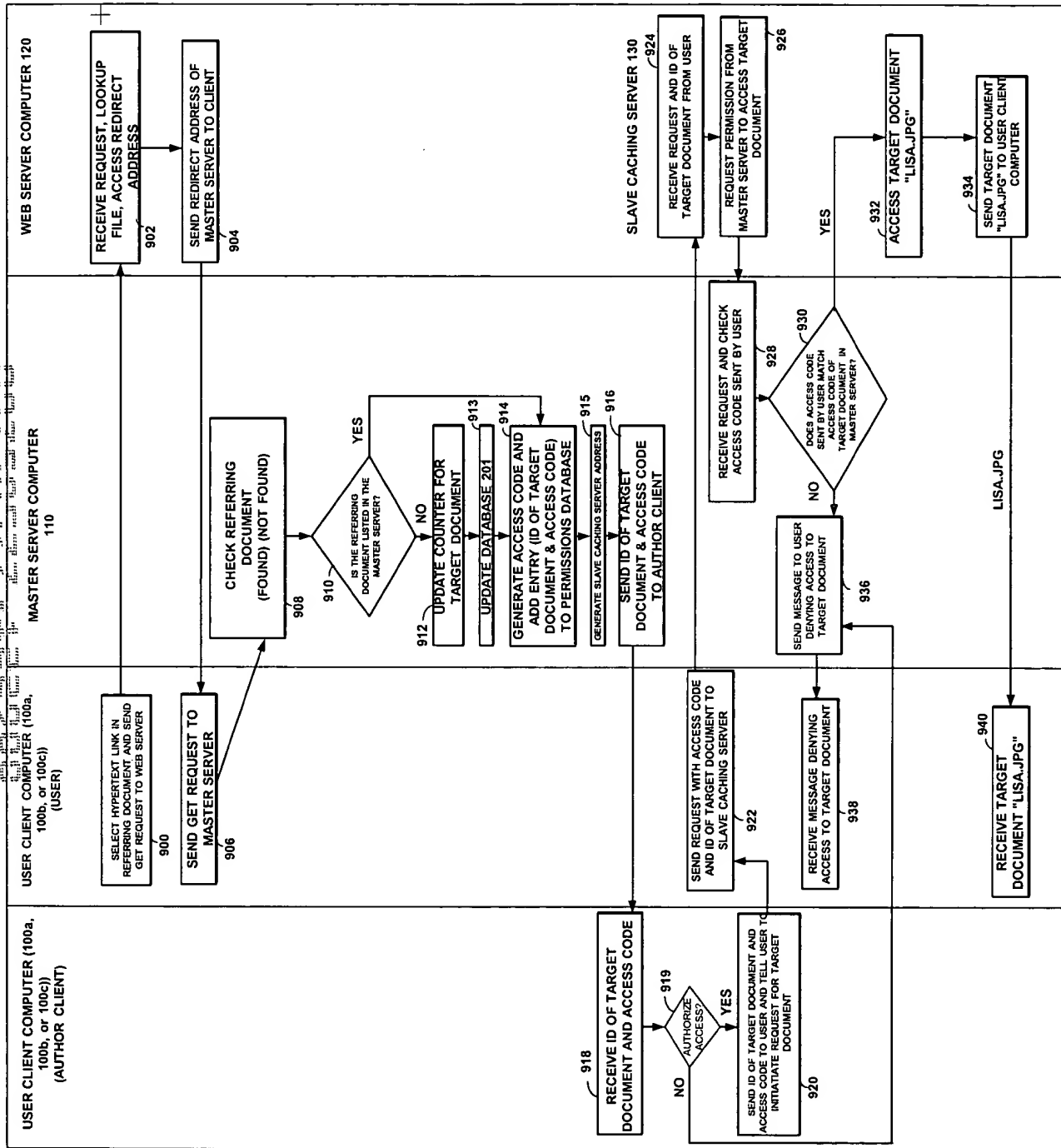


FIG. 6D(2)



EPHRAIM FEIG
A SYSTEM AND METHOD FOR USING LINKS AS VIRTUAL
ATTACHMENTS IN DOCUMENTS

FIG. 7A(1)

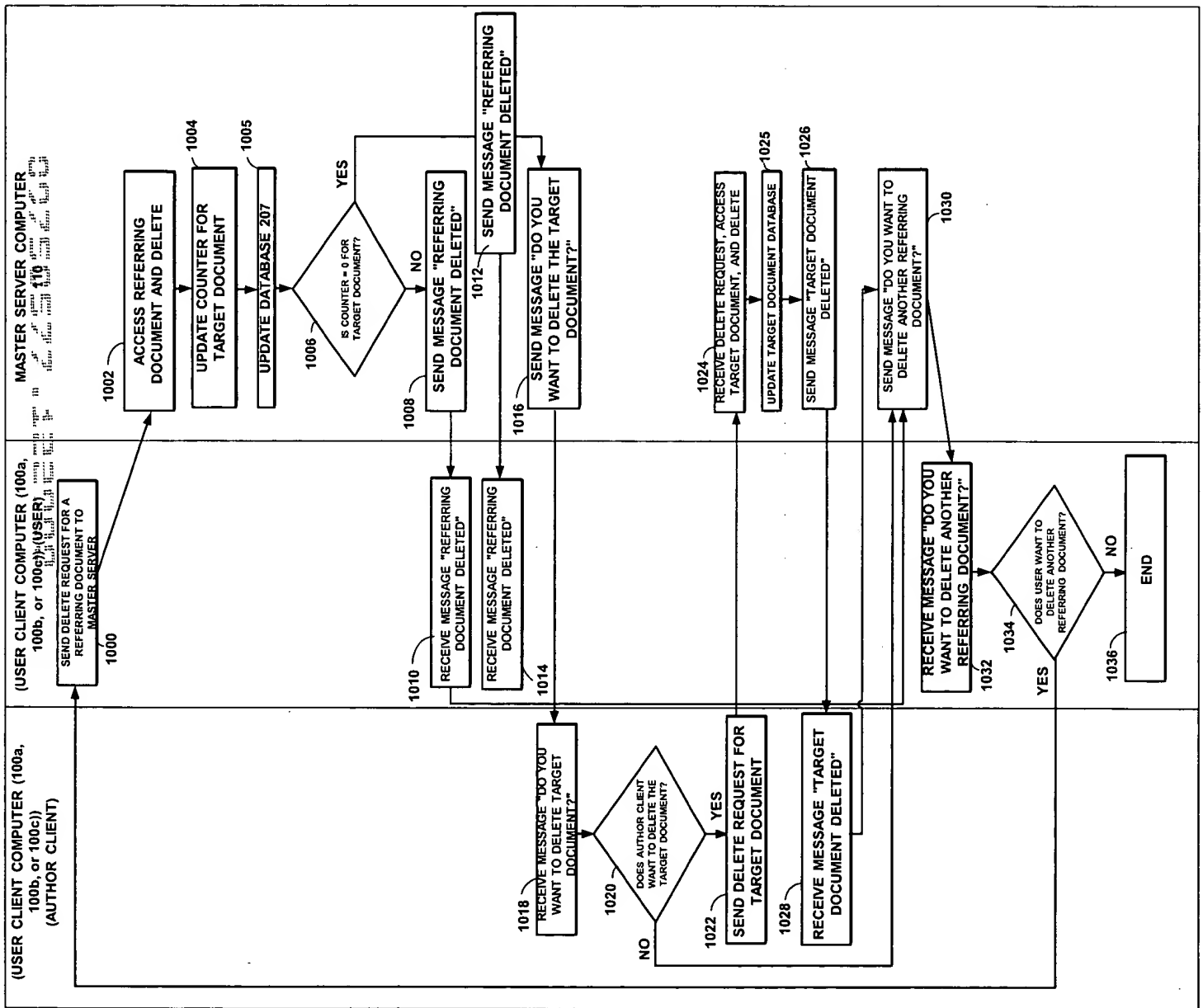
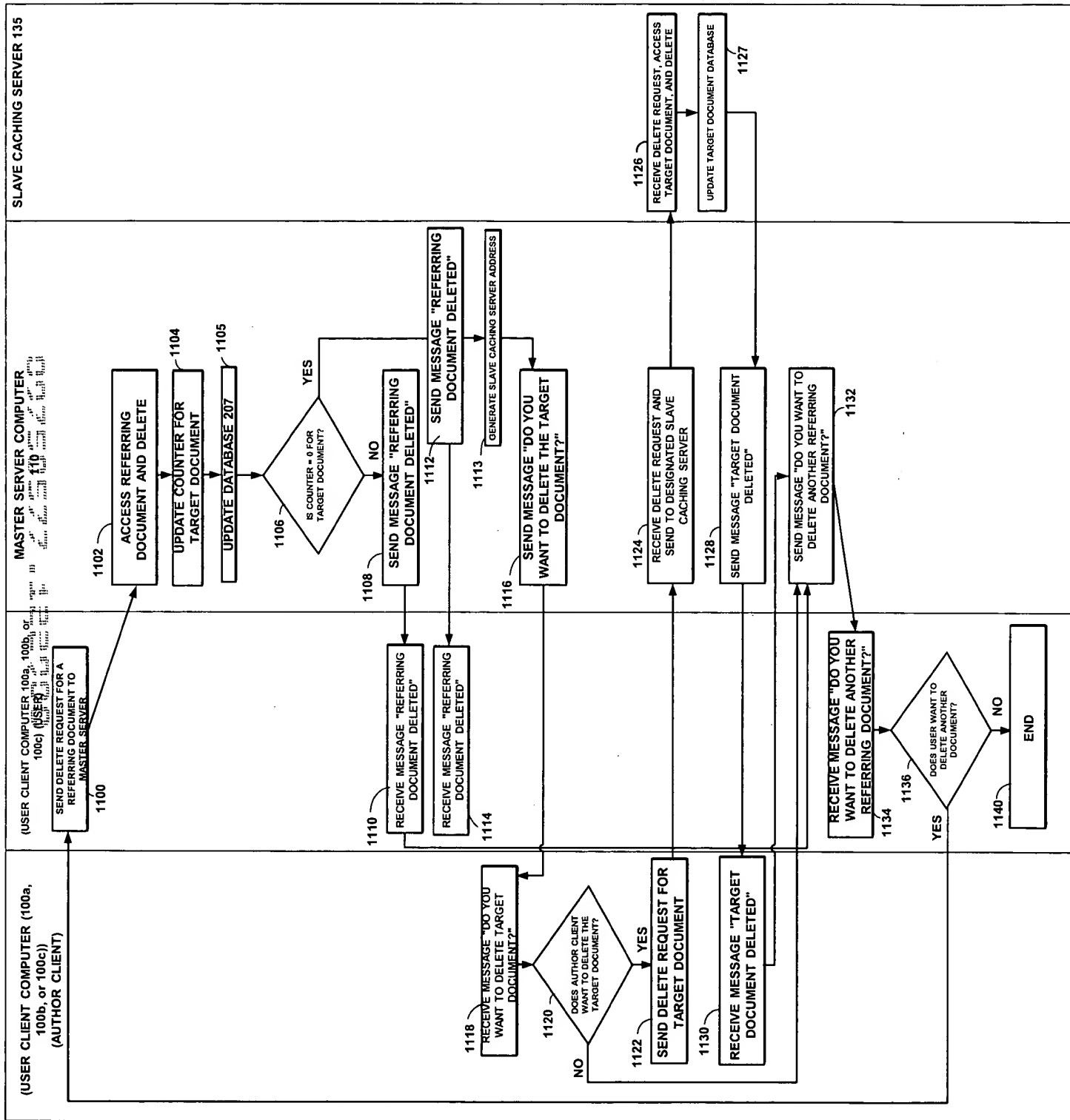
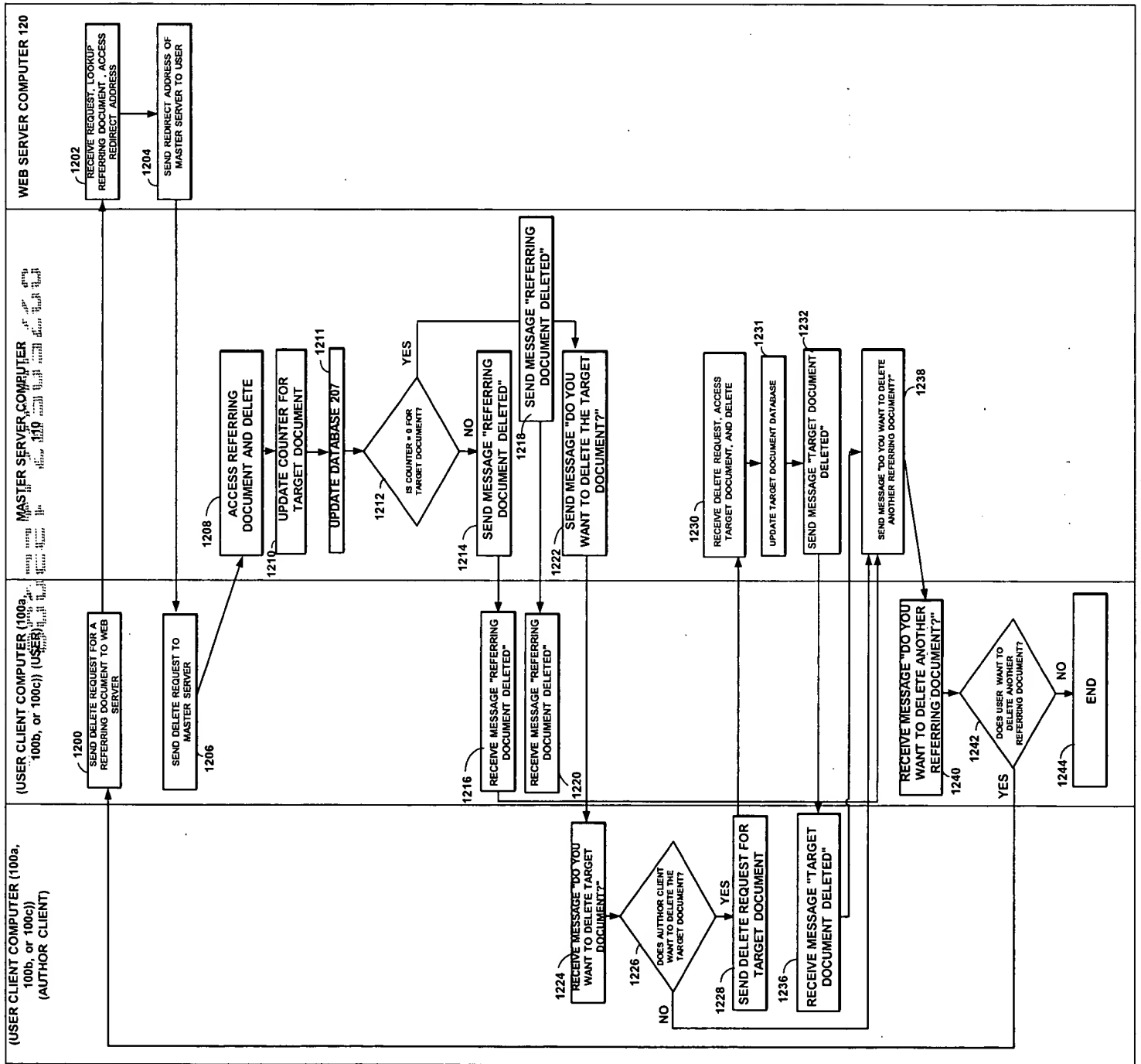


FIG. 7B(1)



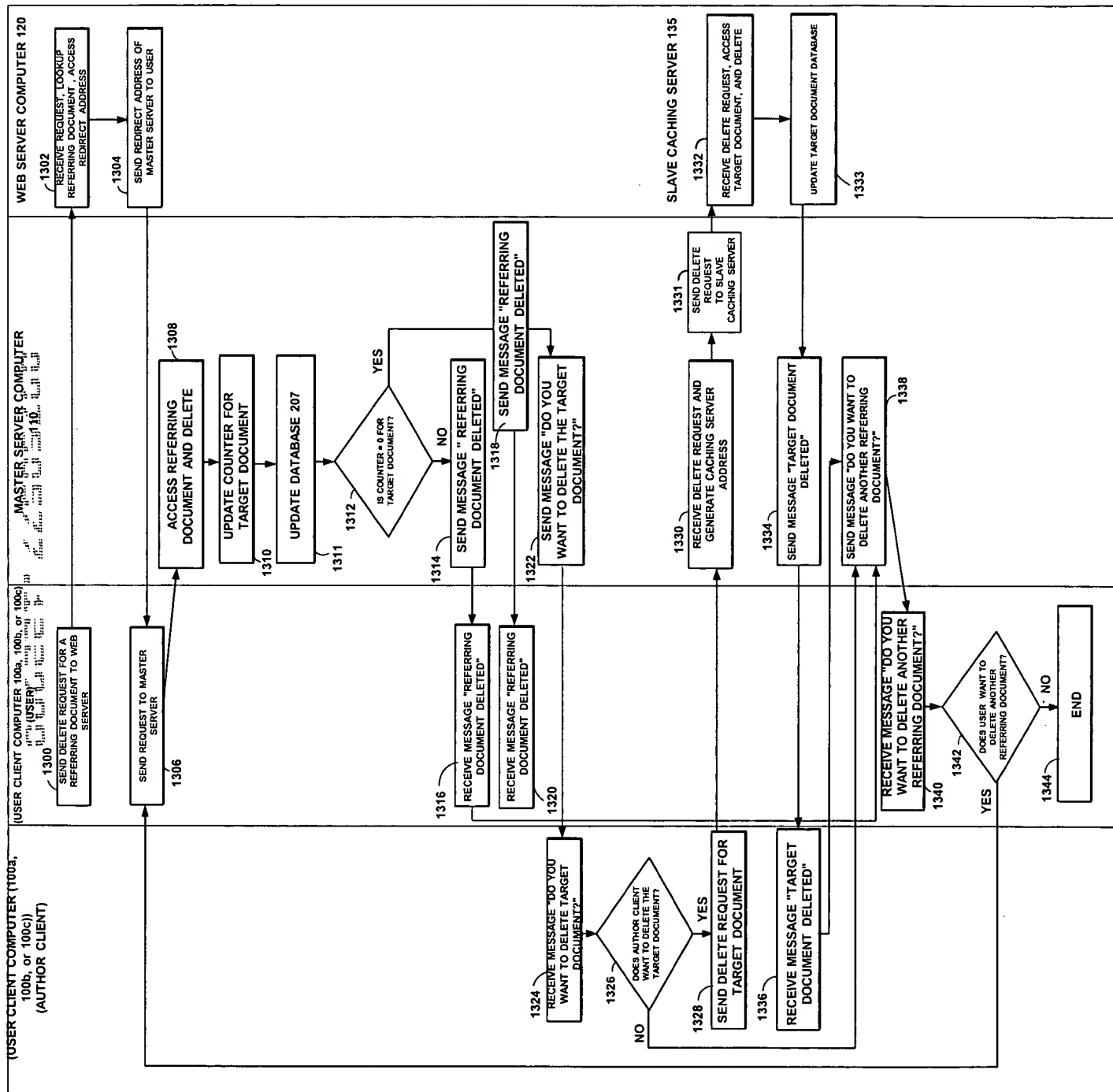
EPHRAIM FEIG
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ATTACHMENTS IN DOCUMENTS

FIG. 7C(1)



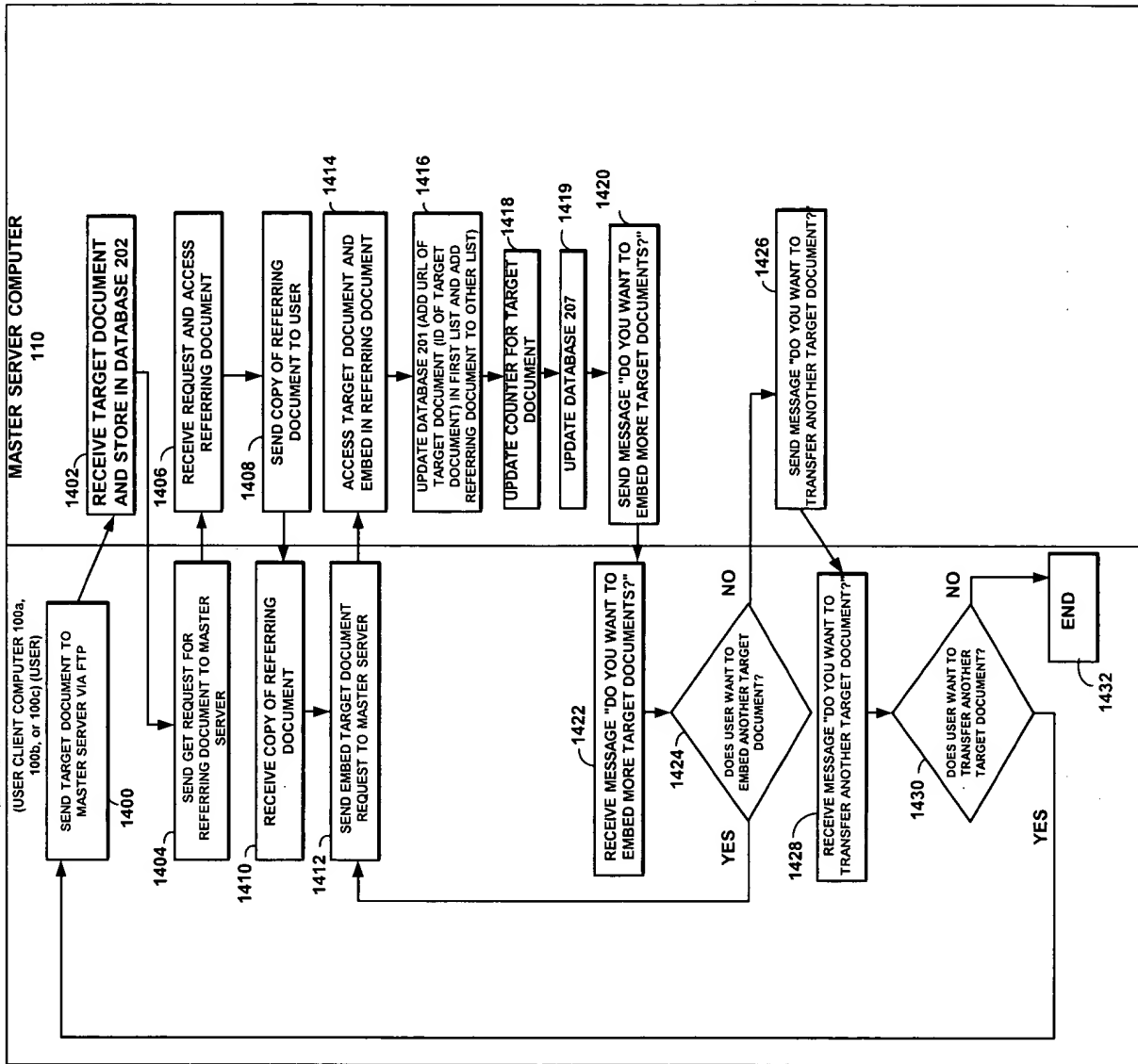
EPHRAIM FEIG
A SYSTEM AND METHOD FOR USING LINKS AS VIRTUAL
ATTACHMENTS IN DOCUMENTS

FIG. 7D(1)



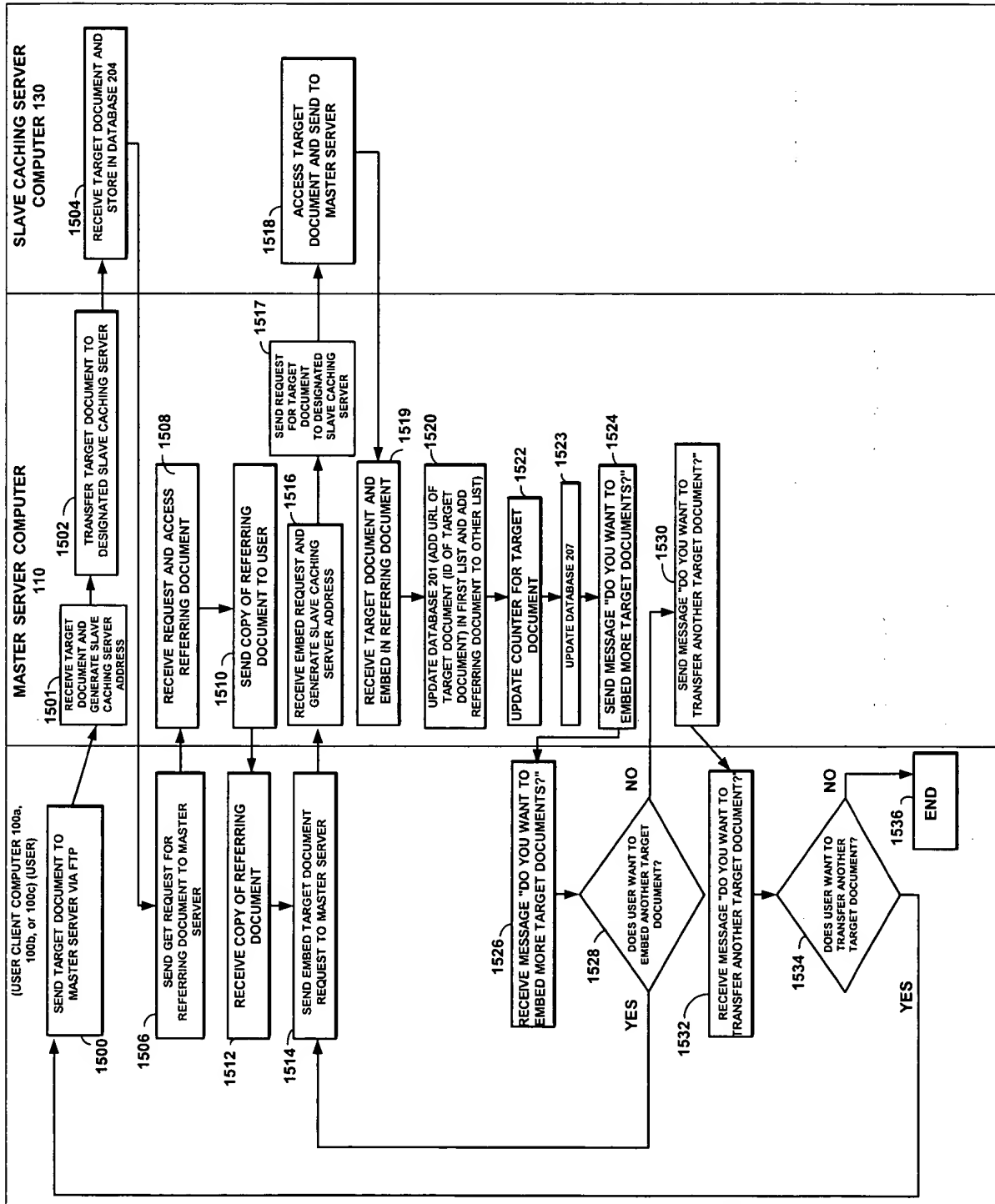
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ATTACHMENTS IN DOCUMENTS

FIG. 8A(1)



EPHRAIM FEIG
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ATTACHMENTS IN DOCUMENTS

FIG. 8B(1)



EPHRAIM FEIG
A SYSTEM AND METHOD FOR USING LINKS AS VIRTUAL
ATTACHMENTS IN DOCUMENTS

FIG. 8C(1)

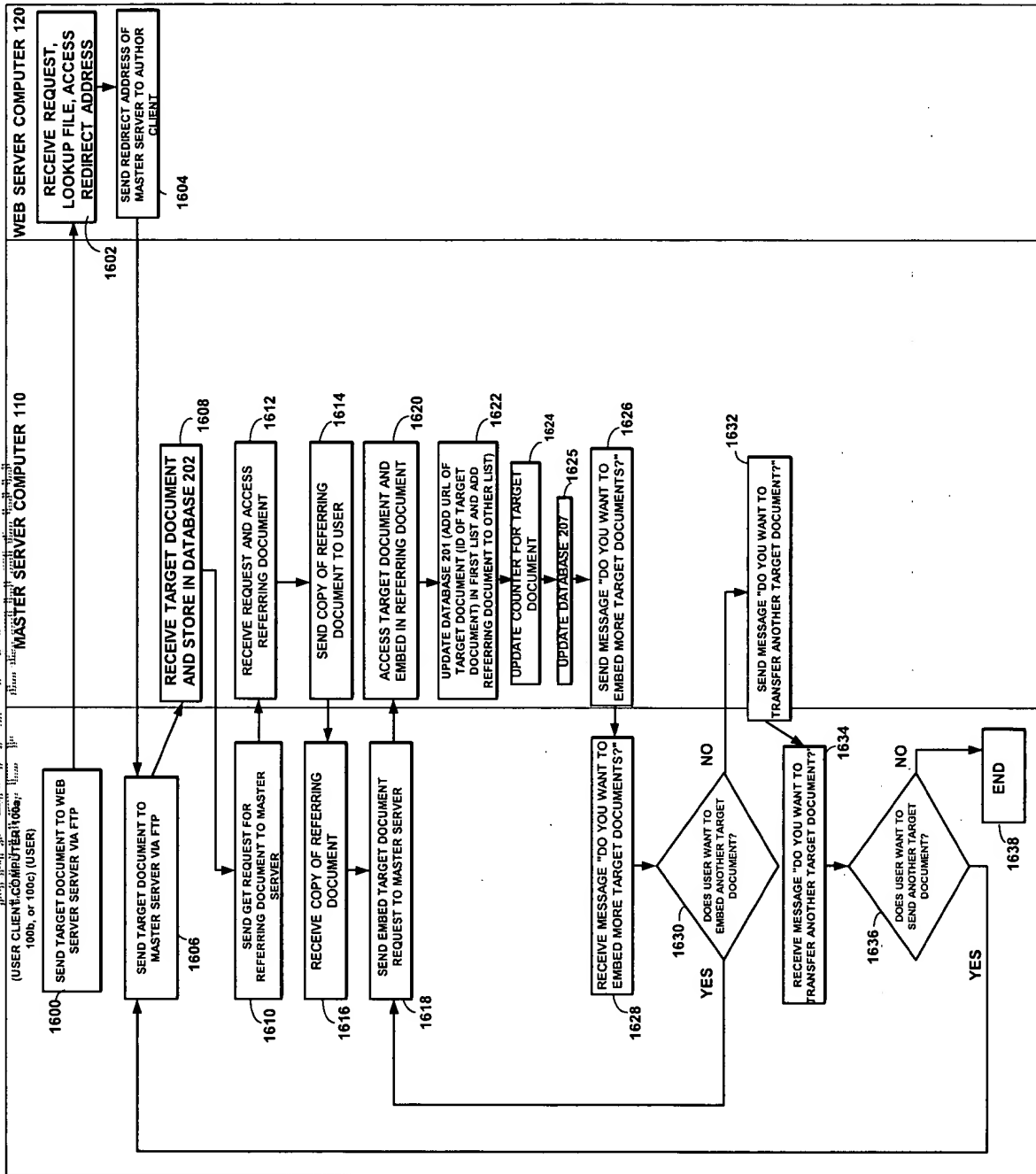
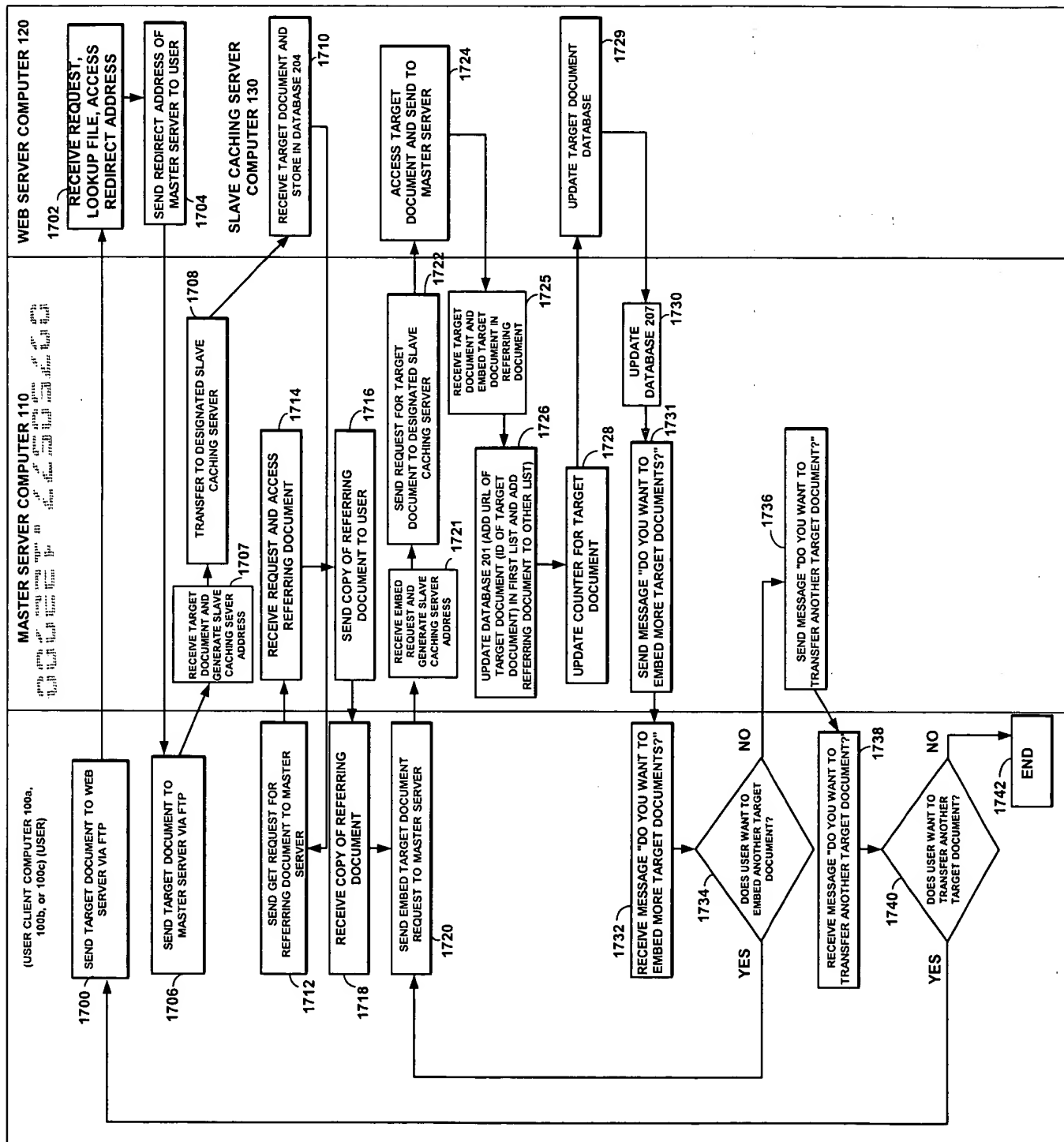


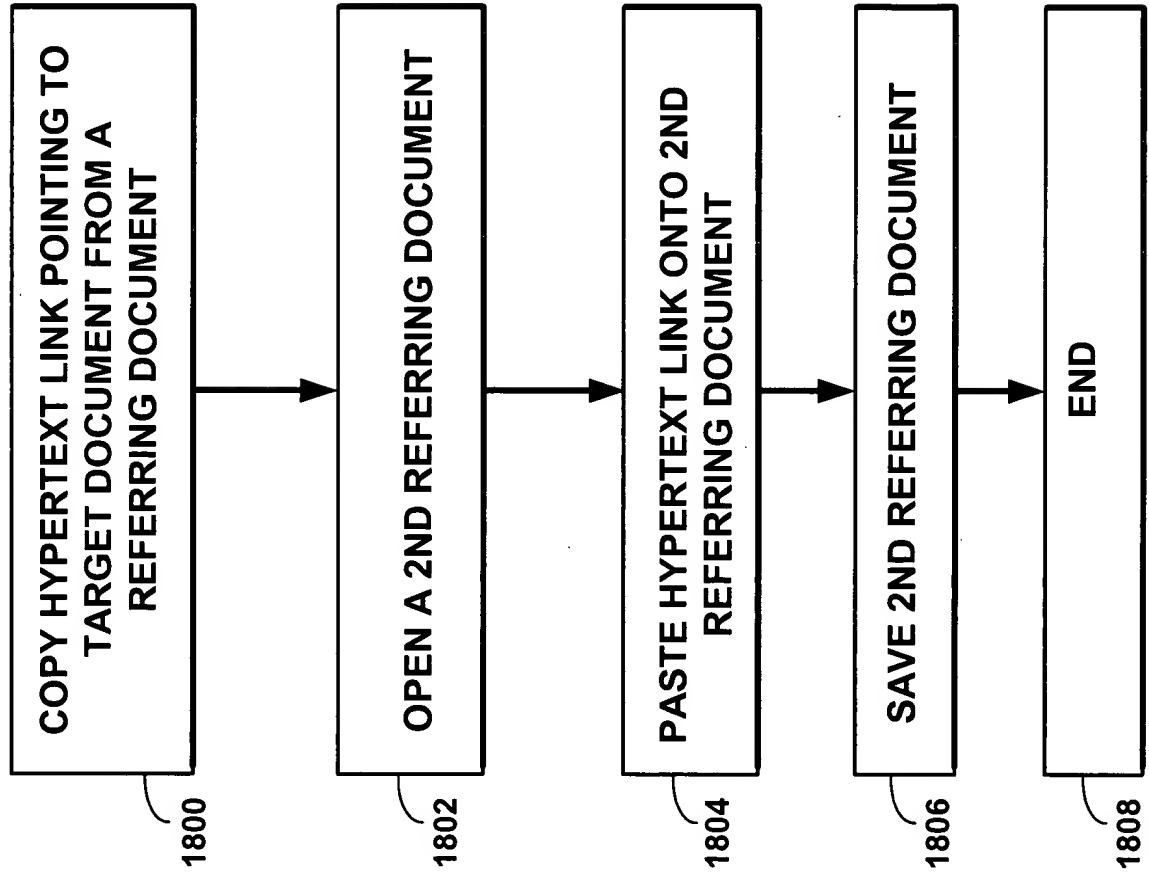
FIG. 8D(1)

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ATTACHMENTS IN DOCUMENTS

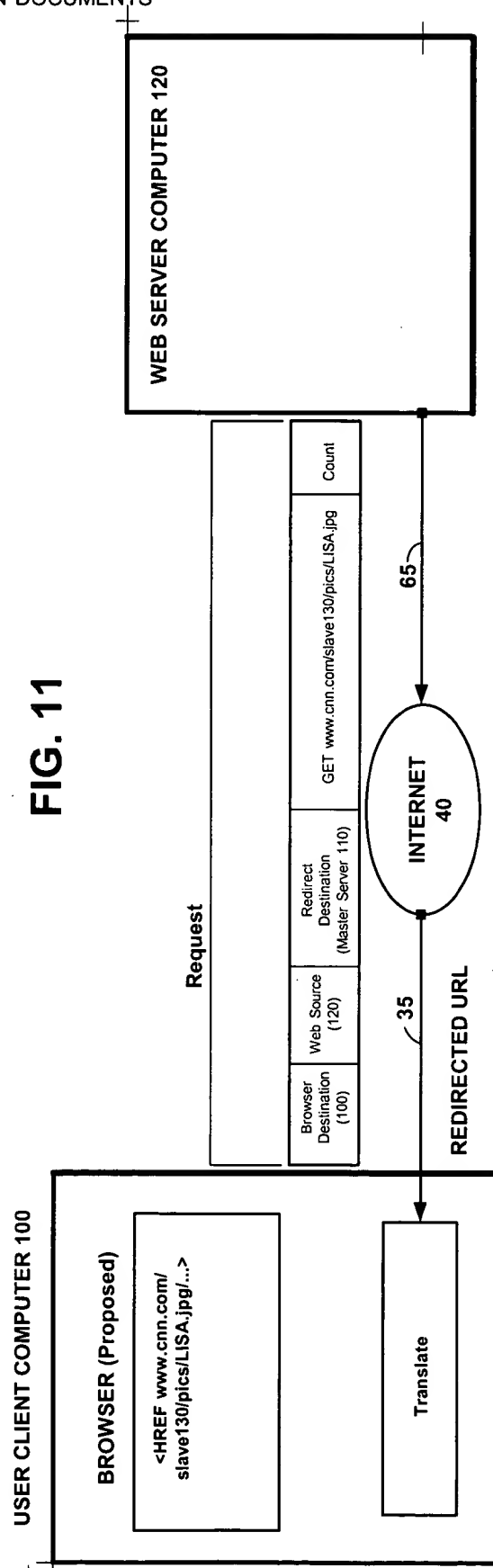
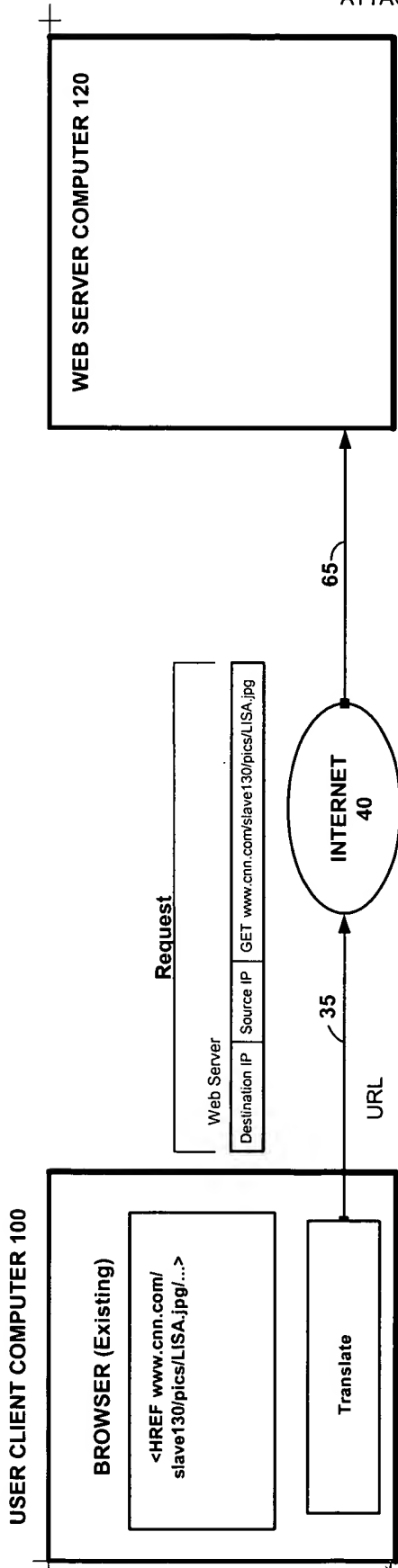


METHOD OF CREATING A HYPERTEXT LINK BETWEEN A TARGET DOCUMENT AND A REFERRING DOCUMENT

FIG. 9



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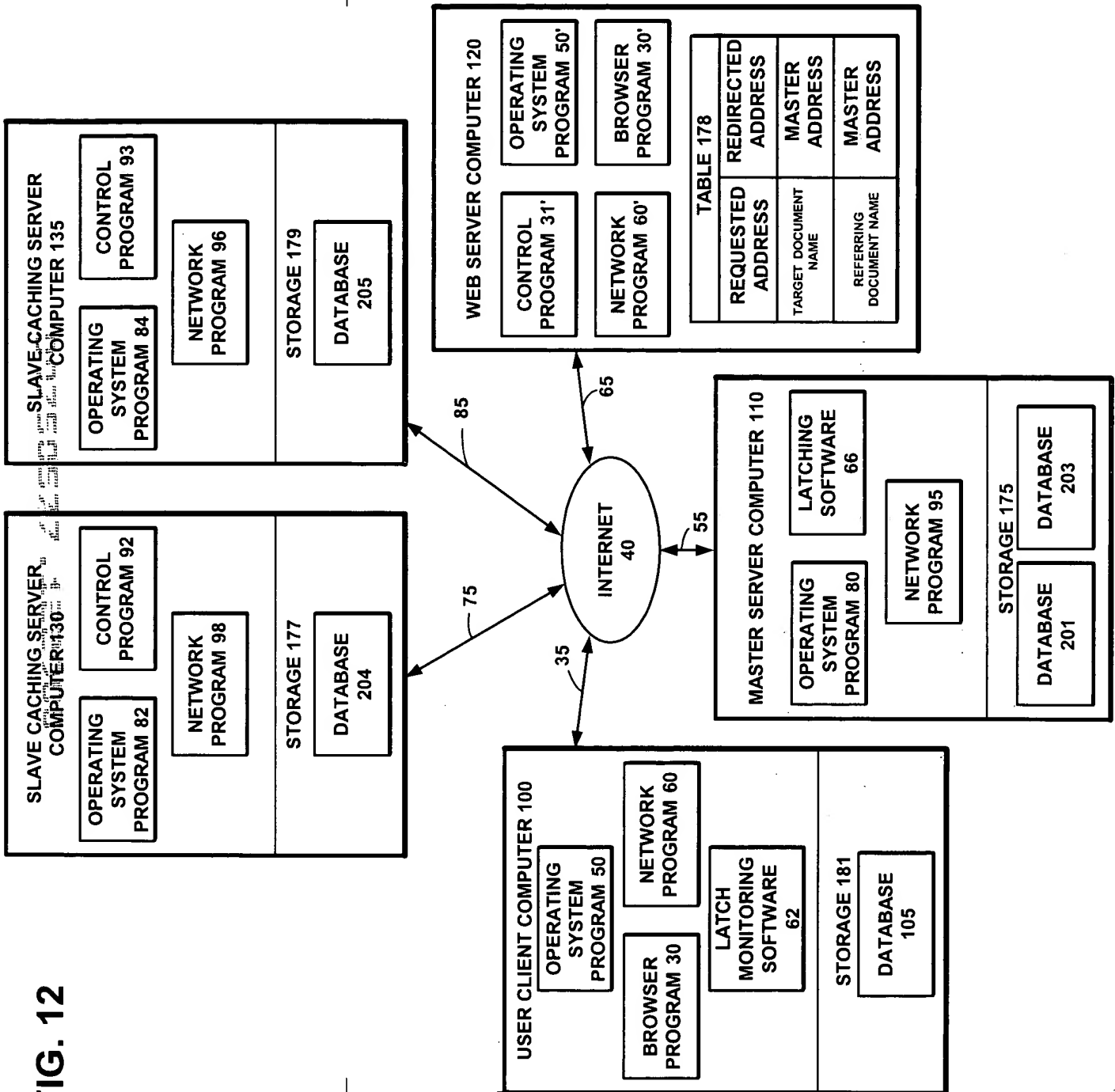


FIG. 13

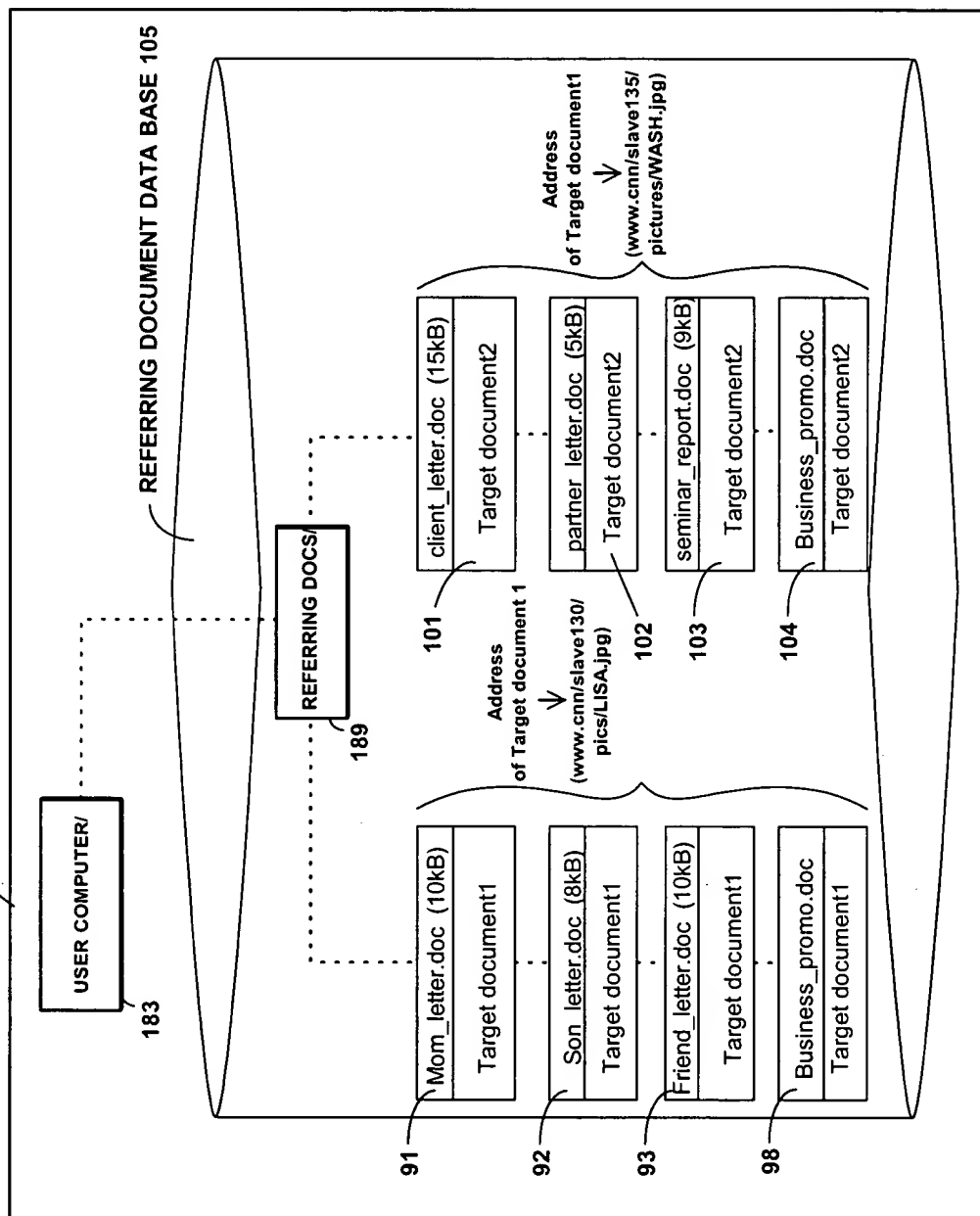


FIG. 14 is a block diagram of a system architecture for a master-slave database configuration. The system includes a MASTER110/ (176) connected to a STORAGE 175. The MASTER110/ is connected to a DB203/ (177) which is connected to a PERMISSIONS DATA BASE 203. The MASTER110/ is also connected to a DB201/ (178) which is connected to an OWNER'S DATA BASE 201. The PERMISSIONS DATA BASE 203 contains a table with columns: URL OF TARGET DOCUMENT IN SLAVE CACHING SERVER COMPUTER (130 or 135) (ID OF TARGET DOCUMENT), ACCESS CODE ASSOCIATED WITH TARGET DOCUMENT IN SLAVE CACHING SERVER COMPUTER (130 or 135), and a third column with values 12345, 68142, 30156, 88121, 12349, 08756, 28101, 37412. The OWNER'S DATA BASE 201 contains a table with columns: URL OF TARGET DOCUMENT IN SLAVE CACHING SERVER COMPUTER (130 or 135), ALL REFERRING DOCUMENTS HAVING A HYPERTEXT LINK POINTING TO A URL OF A TARGET DOCUMENT (TARGET DOCUMENTS STORED IN SLAVE CACHING SERVER COMPUTER (130 or 135)), and a third column with values: jsmith@aol.net/Mom_Letter.doc, jsmith@aol.com/Son_Letter.doc, jnewman@compuserve.com/Friend_Ltr.doc, kjones@ibm.com/Business_promo.doc, jsmith@aol.com/client_Letter.doc, jsmith@sachsinc.com/partner_Letter.doc, tjones@uspto.gov/seminar_report.doc, ylin@ibm.com/Business_promo.doc. The OWNER'S DATA BASE 201 also includes two USE TABLE 1 and USE TABLE 2 sections. USE TABLE 1 lists: LISA.jpg (COUNT = 4), KIM.jpg (COUNT = 0), KAREN.jpg (COUNT = 0), TRAVEL.jpg (COUNT = 0). USE TABLE 2 lists: WASH.jpg (COUNT = 4), PARIS.jpg (COUNT = 0), LONDON.jpg (COUNT = 0), ROME.jpg (COUNT = 0).

STORAGE 175

MASTER110/

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DB203/

PERMISSIONS DATA BASE 203

DB201/

OWNER'S DATA BASE 201

URL OF TARGET DOCUMENT IN SLAVE CACHING SERVER COMPUTER (130 or 135) (ID OF TARGET DOCUMENT)	ACCESS CODE ASSOCIATED WITH TARGET DOCUMENT IN SLAVE CACHING SERVER COMPUTER (130 or 135)	
www.cnn.com/slavet130/pics/LISA.jpg	12345, 68142, 30156, 88121	
www.cnn.com/slavet135/pictures/WASH.jpg	12349, 08756, 28101, 37412	

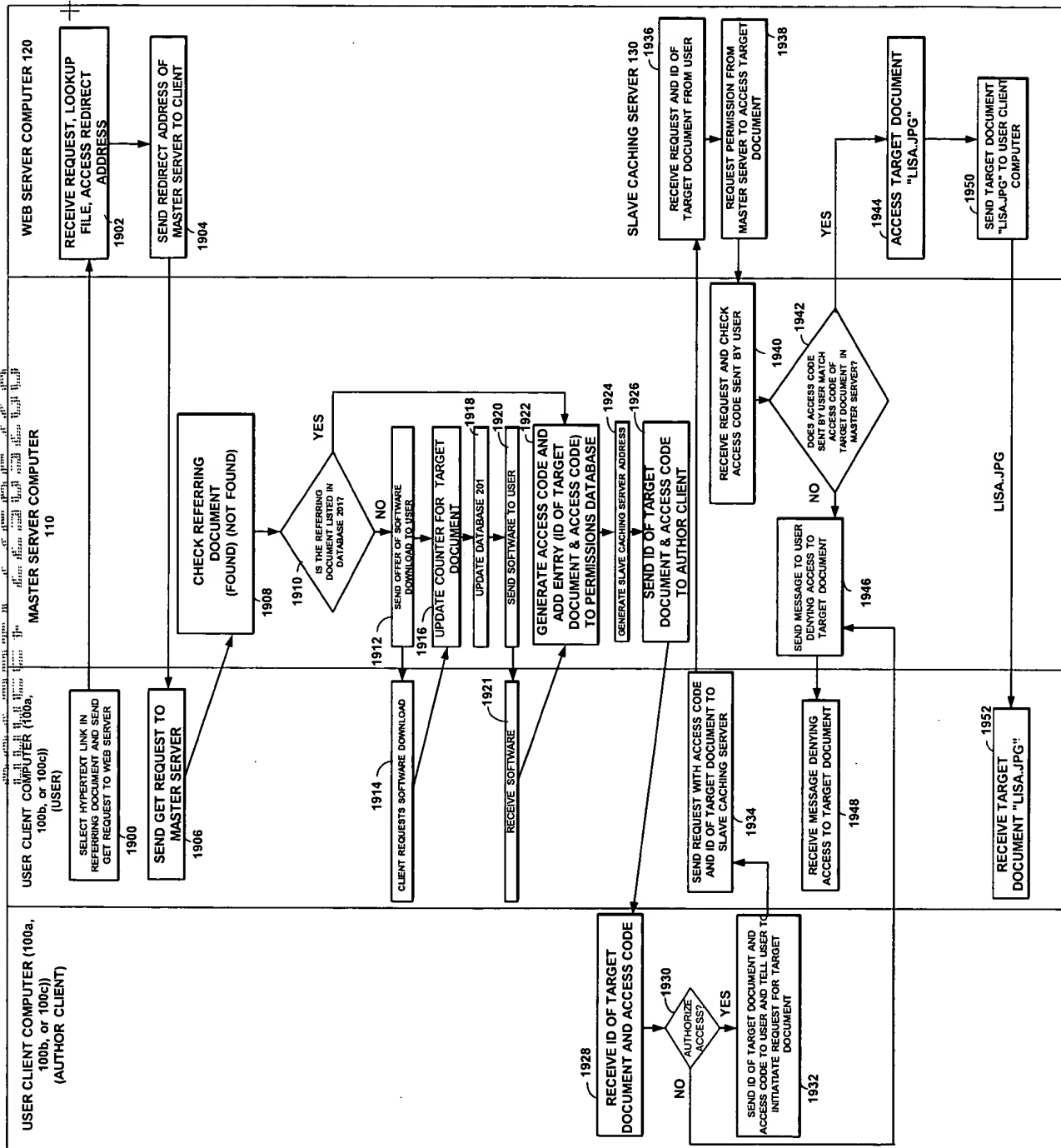
URL OF TARGET DOCUMENT IN SLAVE CACHING SERVER COMPUTER (130 or 135)	ALL REFERRING DOCUMENTS HAVING A HYPERTEXT LINK POINTING TO A URL OF A TARGET DOCUMENT (TARGET DOCUMENTS STORED IN SLAVE CACHING SERVER COMPUTER (130 or 135))	
www.cnn.com/slavet130/pics/LISA.jpg	jsmith@aol.net/Mom_Letter.doc, jsmith@aol.com/Son_Letter.doc, jnewman@compuserve.com/Friend_Ltr.doc, kjones@ibm.com/Business_promo.doc	
www.cnn.com/slavet135/pictures/WASH.jpg	jsmith@aol.com/client_Letter.doc, jsmith@sachsinc.com/partner_Letter.doc, tjones@uspto.gov/seminar_report.doc, ylin@ibm.com/Business_promo.doc	

USE TABLE 1	
LISA.jpg	COUNT = 4
KIM.jpg	COUNT = 0
KAREN.jpg	COUNT = 0
TRAVEL.jpg	COUNT = 0

USE TABLE 2	
WASH.jpg	COUNT = 4
PARIS.jpg	COUNT = 0
LONDON.jpg	COUNT = 0
ROME.jpg	COUNT = 0

FIG. 14

FIG. 15



```

graph TD
    subgraph UCC ["(USER CLIENT COMPUTER 100a, 100b, or 100c)"]
        2000["MONITOR USER FOR DELETION OF REFERRING DOCUMENTS"]
        2002["USER DELETES REFERRING DOCUMENT IN DATABASE 105"]
        2004["SEND DELETE INFORMATION TO WEB SERVER"]
    end

    subgraph MSC ["MASTER SERVER COMPUTER 110"]
        2010["SEND DELETE INFORMATION TO MASTER SERVER"]
        2012["ACCESS REFERRING DOCUMENT LISTING IN DATABASE 201 AND DELETE"]
        2014["UPDATE COUNTER FOR TARGET DOCUMENT"]
        2016["UPDATE DATABASE 203"]
        2018{"IS COUNTER = 0 FOR TARGET DOCUMENT?"}
        2020["SEND MESSAGE 'DO YOU WANT TO DELETE THE TARGET DOCUMENT?'"]
    end

    subgraph SSC ["SLAVE CACHING SERVER 135"]
        2022{"DOES AUTHOR CLIENT WANT TO DELETE THE TARGET DOCUMENT?"}
        2026["SEND DELETE REQUEST FOR TARGET DOCUMENT"]
        2036["SEND MESSAGE 'TARGET DOCUMENT DELETED'"]
    end

    2000 --> 2002
    2002 --> 2004
    2004 --> 2010
    2010 --> 2012
    2012 --> 2014
    2014 --> 2016
    2016 --> 2018
    2018 -- NO --> 2020
    2018 -- YES --> 2020
    2020 --> 2022
    2022 -- NO --> 2036
    2022 -- YES --> 2026
    2026 --> 2036
    2036 --> 2012

```

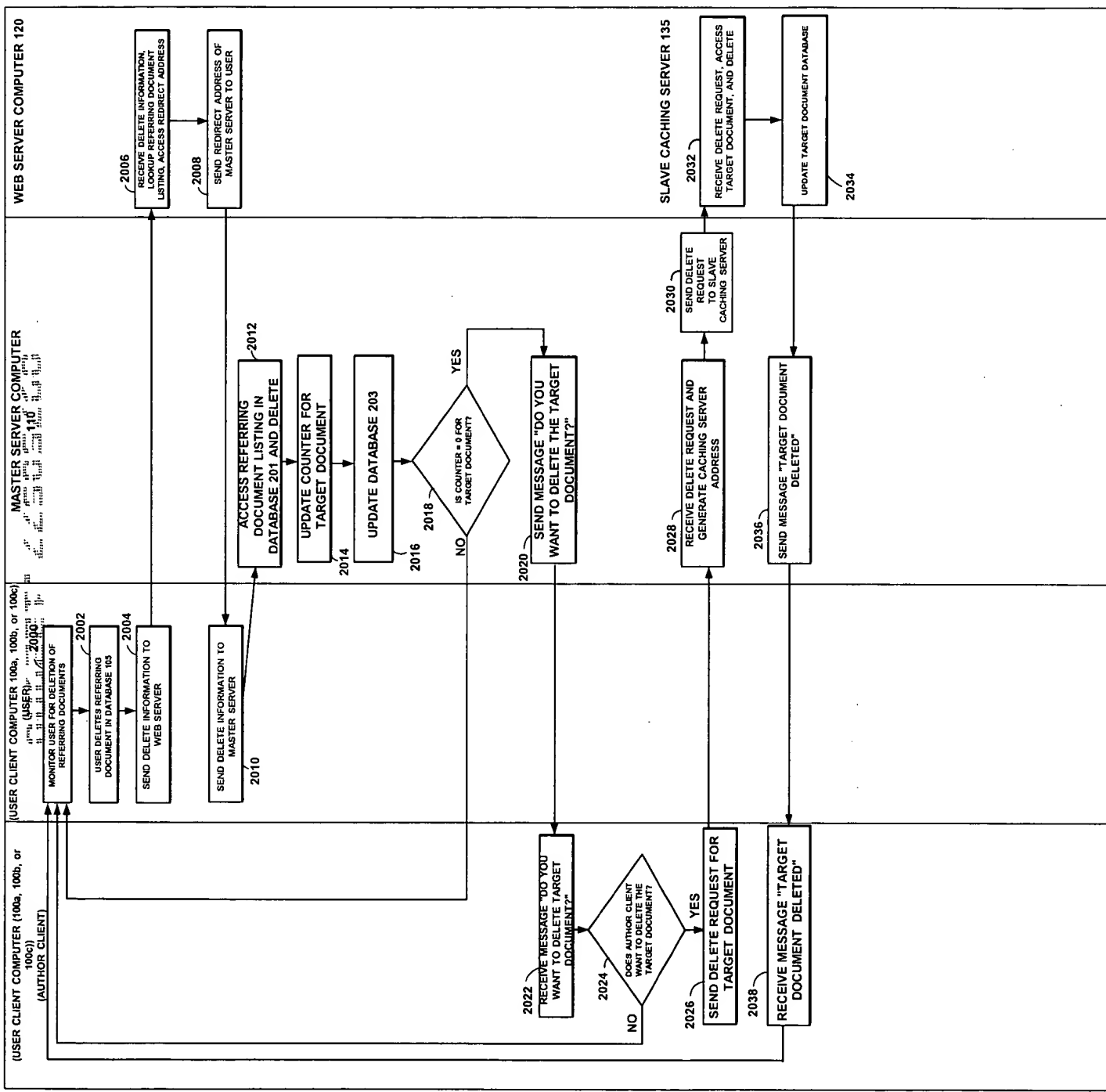


FIG. 17

EPHRAIM FEIG
A SYSTEM AND METHOD FOR USING LINKS AS VIRTUAL
ATTACHMENTS IN DOCUMENTS

